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TRANSACTIONS

OF THE

MEDICAL ASSOCIATION

OF

GEORGIA.

FORTY-THIRD ANNUAL SESSION.

1892.

ATLANTA, GA.
PUBLISHED BY THE ASSOCIATION,
1892.

"RESOLVED, That this Association shall not be considered as endorsing views of authors of papers published in connection with the Transactions, unless definitely so endorsed in the Proceedings of the Association.

"RESOLVED, That the above resolution appear annually upon the title page of our published Proceedings."

Transactions 1873.

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C. D. Hurt.
H. Perdue.
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CONTENTS.

	PAGE.
Officers	4
Annual Committees	5
Minutes of the Forty-Third Annual Session	8
President's Address	33
Ovarian Cyst—J. M. Spence	47
The Relation Between Skin Diseases and the General Health —M. B. Hutchins	50
The Treatment of Abortion, and some of the Complications Incident Thereto—Walter A. Crow	60
Treatment of Pneumonia, with report of cases—H. Perdue.	74
So-called Typho-Malarial Fever—W. P. Williams	92
What is Gynæcology?—R. R. Kime	100
Hemeralopia or Night Blindness—S. Latimer Phillips.	113
Remittent Fever—A. C. Blain	119
The Surgical Treatment of Puerperal Peritonitis	141
What Shall We Do with the Uterus After Abortions—K. P. Moore.	149
Cough: Some of its Causes and its Treatment—C. D. Roy	177
Gun-shot Wound of the Stomach—Report of Case—A. A. Smith.	194
Some Practical Points in Regard to Eye-strain—R. O. Cotter.	200
Preliminary Observations on the Behavior of Iodine in the Presence of Camphor, Menthol, Thymol, etc.—R. J. Nunn	207
Pyelitis and Pyelo-Nephritis as a Probable Cause of Puerperal Eclampsia after Delivery—W. B. Hardman	212
Some Remarks on Tonsil Excisions, with Presentation and Description of a New Instrument—A. G. Hobbs	219
Extirpation of the Rectum for Carcinoma—J. McF. Gaston	222
The Treatment of Hemorrhoids by Carbolic Acid Injection—J. W. Hallum	229
Typho-Malarial Fever—J. W. Duncan.	238

PAGE
Radical Surgery the best Surgery in the Treatment of Extensive Lacerated and Contused Wounds of the Extremities —E. H. Richardson 248
Fevers—H. M. Darden 252
The Diagnosis of some Tumors supposed to be Ovarian—Jas. A. Goggans 256
Some Observations Upon Cataract Operations and After Treatment—A. W. Calhoun 259
The Influence of Civilization and Social Life Upon Women as Viewed from a Medical Standpoint—C. D. Hurt 270
Constitution and By-Laws 279
Roll of Membership 289
In Memoriam 298
Obituaries—Joseph Payne Logan 304
W. B. Wells 307
Fleetwood Walker 308
J. P. S. Houston 310
H. H. Steiner 311
M. W. Havis 312
C. T. Latimer 313
Henry F. Campbell 314
W. O. Dobbins 317
A. H. Baker 318

The next meeting of the Medical Association of Georgia will convene in the city of Americus, on the third Wednesday in April, 1893.

MINUTES

OF THE

Medical Association of Georgia.

FORTY-THIRD ANNUAL SESSION, 1892.

FIRST DAY—MORNING SESSION.

COLUMBUS, April 20th.

The Association convened in Springer's Opera House, and was called to order at 11:25 a. m. by the President, Dr. G. W. Mulligan, of Washington.

President Mulligan introduced the Hon. J. B. Slade, Mayor of Columbus, who delivered the following

ADDRESS OF WELCOME.

Mr. President and Gentlemen of the Medical Association:

So enlightened an audience will pardon a semi-classical allegory. It is said by those who read in books written when the world was younger than now by some three thousand years, that Apollo, the god of music, had presented him a son by the nymph Choronis, himself one of the immortals, by name Æsculapius, gifted by nature's inspiration with all the secrets of medical science and a perfect knowledge of human anatomy, that this demigod, the father of pharmacy, surgery and therapeutics, tired of the agonies of men and their degenerate woes, ascended to Olympus, but left in his stead, to watch over the physical distresses of mortals, four beautiful, charming daughters, the nymphs by name, Hygiea, Ægli, Panacea and Iaso.

To Iaso he gave in keeping the preservation of the race of men —charming, hopeful beauty; she sought in every dale and on every mountain for the waters of perpetual youth. Failing to find the desired fountain she deserted her charge, and now rests

on the other side of the river. To Ægli he committed the glories and splendor of the perfect human form. She shed the light of her resplendent eyes upon the race in vain search for perfection, and giving up the hopeless task, leaving her inspiration only in the Grecian bend, saw as she departed the earth divine perfection glow alone in the chiseled marble.

To the incomparable Panacea, the gay, deceiving beauty, that had a sweet promise, a sugar-coated and gilded pill, one little nostrum for every ill, he gave trust over all patent medicines, the E. E. E.'s, the B. B. B.'s, the S. S. S.'s, the W. W. C.'s and even Nature's 9. This fair beauty lives to-day, though some of her nostrums are dead, and presides triumphant over her attractive realm.

To Hygiea, the fairest of the four, he gave a charge, cleanliness, consistency, common sense, his knowledge of surgery, the hidden secrets of chemistry, the logical cause and effect, sympathy for the real woes of sick and sorrowing humanity, nerve to destroy a hat full of good eyes to learn how to successfully remove the crystaline lense from a defective eye and give it sight, and contempt for deceptions at whatever cost. To these high priests of this fair Hygiea, I have the honor to present the freedom of this beautiful Queen City of Spindles, and welcome to the hospitable city of Columbus this distinguished Medical Association of the State of Georgia.

On behalf of the Association, Dr. James B. Baird, of Atlanta, responded as follows:

RESPONSE BY DR. BAIRD.

Mr. President and Fellow Members of the Georgia State Medical Association:

Whatever this assembly may miss in the unexpected change in the programme in response to the cordial welcome to which we have just listened, I am sure there can be no one who can respond from nearer the heart than I can. I know full well, Mr. President, the true import of the words to which we have listened. I know the meaning of a Columbus hospitality. After an absence from this delightful city of a quarter of a century, the place of my nativity, the happy home of my childhood, the arena of my youthful endeavors and of my earliest triumphs, I return to-day to rejoice and participate in its tranquil beauty, in its serene loveliness in this, the loveliest season of the year. It is a privilege to be here, and I am sure all of us appreciate it. I cannot, however, sir, but realize the havoc that time has wrought. I find persons that were identified with this

place are to-day absent. Among our own profession I miss Boswell, Billing, Bozeman, Grimes, Stanford, and others well known to most of us. These men, after their useful, laborious lives, have laid down their emblems of toil and have gone with the great majority beyond the river to rest forever in the sunlight of their Creator's countenance and to receive the benediction, "Well done, thou good and faithful servant."

Mr. President, while men may fall and men have fought, humanity survives. The mantles of the prophets have fallen upon younger shoulders, but upon true disciples, and the work goes nobly on. There is no faltering in our ranks, for like soldiers in battle they fall here and there, but the ranks go on, and the fight lacks not. What is true of our profession is true of other callings, and it is with sadness that I realize this fact. While this is true, sir, that we discover in this beautiful city evidences of thrift, of prosperity and of improvement on every hand, during that quarter of a century the people have not been idle. We observe the same solidity in its commerce, the same integrity among its merchants, the same industry and conservatism among its artisans, the same honor and dignity in its medical profession, the same hospitality of its people, the same glorious charm and grace and fascination in its society. Far be it for me, Mr. President, to utter in my affection, my admiration, and in my reverence for Columbus, a single syllable in hollow flattery; but we know that these are among the characteristics of the place, and these characteristics grouped together and united in various ways make up the history of this community, and that history, sir, is one that all men who love truth and admire virtue must approve and admire. Therefore, sir, in accepting the hospitality of Columbus, which in behalf of this Association, I do, we know that we are accepting much; we understand the value of the welcome that you have proffered, and we accept the cordial greetings with sincere appreciation.

Prayer was offered by the Rev. Robert Harris, of Columbus.

Dr. Mark H. O'Daniel, Second Vice-President, took the chair, and President Mulligan proceeded to deliver his annual address.

Dr. R. H. Taylor, of Griffin, reported on behalf of the committee on programme, in the absence of the chairman, Dr. J. F. Lancaster, of Forsyth. He said the committee had sent out 2,500 circulars to the various members of the

Association, soliciting scientific contributions in order to arrange a programme for the meeting. As a result, the committee reported forty-three papers.

The local committee of arrangements would tender a banquet to the Association on the evening of the 21st at the Rankin House, and that members would obtain tickets from the secretary.

The following is the programme:

FIRST DAY—WEDNESDAY, APRIL 20.

Morning Session, 9:30 O'clock.

Address of welcome and response.
Prayer.
President's Annual Address.
Report of Committee on Programme.
Filling vacancies on Board of Censors.
Applications for Membership.
Report of Secretary.
Report of Treasurer.
Appointment of Committee to audit books of Treasurer and Secretary.

1. A case of Ovarian Cyst, by J. M. Spence, M. D., Waresboro.
2. The Influence of Civilization and Social Life upon Women, as Viewed from a Medical Standpoint, by C. D. Hurt, M. D., Columbus.

Adjournment.

AFTERNOON SESSION—2:30 O'CLOCK.

Report of Board of Censors.
Applications for Membership.

3. The Relation Between Skin Diseases and the General Health, by M. B. Hutchins, M. D., Atlanta.
4. The Treatment of Abortion and some of the Complications incident thereto, by W. A. Crow, M. D., Atlanta.
5. Ligation of the Left External Iliac Artery for Circumscribed Traumatic Aneurism of the upper third of the Femoral Artery—Gangrene of the Leg—Death on the 40th day, by H. J. Williams, M. D., Macon.
6. Treatment of Pneumonia, with report of Cases, by H. Perdue, M. D., Barnesville.
7. So-called Typho-Malarial Fever, by W. P. Williams, M. D., Waycross.

8. A Case of Lithotomy in a boy only eighteen months old, successfully performed without the aid of an Anæsthetic of any kind, with remarks, by A. C. Davidson, M. D., Sharon.

9. What is Gynæcology? by R. R. Kime, M. D., Atlanta.

10. Hemeralopia or Night Blindness, by S. Latimer Phillips, M. D., Savannah.

11. Remittent Fever, by A. C. Blain, M. D., Macon.

SECOND DAY—THURSDAY, APRIL 21.

Morning Session, 9 O'clock.

Reading of Minutes.

Applications for Membership.

Report of Board of Censors.

12. The Treatment of Puerperal Peritonitis, by W. E. B. Davis, M. D., Rome.

13. Typhlitis, and Report of Case, by S. M. Matthews, M. D., Quitman.

14. Some of the Fads and Fancies of the Medical Profession, by J. C. LeHardy, M. D., Savannah.

15. Some Observations upon Cataract Operations and After Treatment, by A. W. Calhoun, M. D., Atlanta.

16. How Shall We Manage the Uterus after Abortion? by K. P. Moore, M. D., Macon.

17. Cough—Some of its Causes and Treatment, by Chas. D. Roy, A. B., M. D., Atlanta.

18. Gunshot Wound of Stomach, with Report of a Case, by A. A. Smith, M. D., Hawkinsville.

19. A Combination of Carbolic Acid and Camphor as an Antiseptic, by Wm. Perrin Nicolson, M. D., Atlanta.

20. Some Practical Points in Reference to Eye Strain, by R. O. Cotter, M. D., Macon.

Orator's Address.

Adjournment.

AFTERNOON SESSION—2:30 O'CLOCK.

Report of Standing Committees.

Appointment of Committee to Nominate Officers.

Applications for Membership.

Report of Board of Censors.

21. Intestinal Obstruction, Varieties, Diagnosis and Treatment, by J. B. Hinkle, M. D., Americus.

22. Plaster of Paris in Surgery, by W. F. Westmoreland, M. D., Atlanta.

23. Action of Fibroid Tumors after the Menopause, by Virgil O. Hardon, M. D., Atlanta.

24. Preliminary Observations on the Behavior of Iodine in the Presence of Camphor, Menthol, Thymol, etc., by R. J. Nunn, M. D., Savannah.

25. Lithotomy, with Report of Cases, by W. S. Elkin, M. D., Atlanta.

26. Eclampsia after Delivery, with Report of Cases. A Rare Fatty Tumor, by W. B. Hardman, M. D., Harmony Grove.

27. Chorea, by Hugh Hagan, M. D., Atlanta.

28. Report of Perineal Sections for Stricture, Stone in Bladder and Cystitis, by Floyd W. McRae, M. D., Atlanta.

Adjournment.

THIRD DAY—FRIDAY, APRIL 22.

Morning Session—9 O'CLOCK.

Reading of Minutes.

Applications for Membership.

Report of Committee on Nomination of Officers.

29. Some Remarks on Tonsil Excisions, with presentation and description of a new instrument, by A. G. Hobbs, M. D., Atlanta.

30. How to Best Conduct Labor to Prevent Injuries to the Os Uteri and Perineum, by A. W. Griggs, M. D., West Point.

31. Gunshot Wounds of the Eye—unusual results, by Geo. A. Wilcox, M. D., Augusta.

32. Radical Surgery the Best Surgery in the Treatment of Extensive Lacerated and Contused Wounds of the Extremities, by E. H. Richardson, M. D., Atlanta.

33. Report of a Case of Catalepsy and Treatment, by A. Sydney Johnson, M. D., Bowman.

34. Extirpation of Rectum for Carcinoma, by J. McF. Gaston, M. D., Atlanta.

35. Treatment of Hemorrhoids by Carbolic Acid Injection, by J. W. Hallum, M. D., Carrollton.

Adjournment.

AFTERNOON SESSION—2:30 O'CLOCK.

Applications for Membership.

Report of Board of Censors.

36. Pelvic Abscesses, Drainage of, by Geo. H. Noble, M. D, Atlanta.

37. Flexion of Cervix, Causes, Effects and Treatment, by J. W. Bailey, M. D., Gainesville.

38. The Relation and Dependencies existing between the Specialist and the General Practitioner of Medicine and Surgery, by J. W. Griggs, M. D., West Point.

39. Typho-Malarial Fever, by J. W. Duncan, M. D., Atlanta.
40. Typhlitis, by Wm. O'Daniel, M. D., Bullard.
41. Membranous Croup, with Report of a Case Successfully Treated by Tracheotomy, by R. M. Harbin, M. D., Calhoun.
Unfinished Business.
New Business.
Installation of Newly Elected Officers.
Adjournment.

Respectfully submitted,
J. F. LANCASTER, Chairman.
R. H. TAYLOR,
T. M. HOLMES.

The President appointed Drs. W. O'Daniel, J. G. Hopkins and R. O. Engram on the Board of Censors to serve during the sessions in the absence of three of the regular members.

The report of the Treasurer and Secretary was called for. Dr. Howell asked for further time, as the Treasurer had not arrived, which was granted.

Secretary Howell then read a communication from Dr. J. B. S. Holmes, of Rome, inviting the Association to hold its next meeting in that city, also read letters of regret from the following members: Drs. J. F. Lancaster, Dewell Gann, S. L. Phillips, S. M. Matthews, N. M. Darden.

Dr. T. L. Lallerstedt offered the following resolution, which, on being put to the Association, was lost:

Resolved, That this Association appropriate one-fourth of the time for labor to discussing questions of general practice among members, etc.

The President appointed as a committee to audit the books of the Treasurer and Secretary, Drs. A. W. Calhoun, R. J. Nunn and R. H. Taylor.

Dr. Calhoun: I have been on that committee, Mr. President, several times, and would like you to substitute some other gentleman.

The President then appointed Dr. James B. Baird as chairman of the Auditing Committee.

Dr. J. M. Spence, of Waresboro, read a paper entitled "A Case of Ovarian Cyst."

Dr. C. D. Hurt, of Columbus, read a paper on "The Influence of Civilization and Social Life upon Women as Viewed from a Medical Standpoint."

On motion the Association adjourned till 2:30 P. M.

FIRST DAY—AFTERNOON SESSION.

The Association re-assembled at 3 P. M., and was called to order by the President.

The Board of Censors made reports on all applications for membership during the morning session. They reported favorably upon them, and they were duly elected members of the Association.

Dr. M. B. Hutchins, of Atlanta, read a paper entitled "The Relation between Skin Diseases and the General Health."

Discussed by Drs. Calhoun and Lockhart.

Dr. P. R. Cortelyou, of Marietta, offered the following resolution, which, on being seconded, was carried:

WHEREAS, An amendment to the Constitution providing for the election of general officers of the Association by ballot in open session is lying upon the table to be acted upon at this meeting,

Resolved, That said amendment be referred to a committee of five, to be appointed by the chair, to perfect and report said amendment in proper form for action thereon by the Association.

(See page 22, Transactions of 1891).

The President appointed on this committee, Drs. W. O'Daniel, A. W. Calhoun, R. J. Nunn, A. A. Smith, and B. R. Dostor.

Dr. R. R. Kime, of Atlanta, then read a paper entitled, "What is Gynæcology?"

Discussed by Drs. McIntosh, Nunn, and Crow.

Dr. James A. Goggans, of Alexander City, Alabama,

delegate from the Alabama State Medical Association, was, on motion, accorded the privileges of the Association. Dr. Goggans then made a few brief and timely remarks.

On motion, the Association adjourned till Thursday, 9 A. M.

SECOND DAY—MORNING SESSION.

APRIL 21, 1892.

The Association was called to order at 9 A. M. by the President.

The first thing in order was the reading of the minutes of the previous sessions by the Secretary, which were read and approved.

The Board of Censors made a further report on applications for membership, which, on motion, was adopted.

Dr. A. C. Blain, of Macon, read a paper on "Remittent Fever."

Discussed by Drs. Hill, Duncan, Davis, Spence, Lallerstedt, Smith, Currie, Lockhart, Mark H. O'Daniel, Cortelyou, and discussion closed by the essayist.

Dr. W. E. B. Davis, of Rome, read a paper on "The Surgical Treatment of Puerperal Peritonitis."

On motion of Dr. Kime, the discussion on this paper was postponed till after the reading of Dr. Moore's paper, and the two papers were discussed conjointly.

Dr. K. P. Moore, of Macon, then read a paper entitled "How Shall We Manage the Uterus After Abortion?"

Discussed by Drs. Goggans, Kime, Griggs, McIntosh, Hardman, Crow, Nunn, Duncan, Hopkins, and discussion closed by the essayists.

Dr. C. D. Roy, of Atlanta, read a paper on "Cough, Some of Its Causes and Treatment."

Discussed by Drs. Cortelyou, Cotter, Mark H. O'Daniel, Hardman, and Lallerstedt.

Dr. A. A. Smith offered the following resolution, which was adopted by a rising vote:

WHEREAS, Since the last meeting of the Association, death has invaded our ranks and removed from among us an honored and distinguished member, Dr. Henry F. Campbell, of Augusta.

Resolved, Therefore, that while we bow in humble submission to the decree of Divine Providence, yet the Medical Association of Georgia, as well as the profession at large, truly and sincerely mourn the loss that they have sustained in the death of Dr. Campbell.

On motion the Association adjourned until 2:30 P. M.

SECOND DAY—AFTERNOON SESSION.

The Association re-assembled at 2:30 P. M. and was called to order by the President.

Dr. A. W. Calhoun, of Atlanta, read a paper entitled, "Some Observations upon Cataract Operations and After Treatment."

Discussed by Drs. Cotter, McIntosh, and discussion closed by the essayist.

The report of the Committee on Prize Essays was called for, Dr. R. J. Nunn, chairman.

COLUMBUS, Ga., April 20, 1892.

To the Medical Association of Georgia:

GENTLEMEN:—The Committee on Prize Essay Fund begs leave to report that the fund, including accumulated interest, now amounts to one hundred and ten dollars and seventy-five cents, ($110.75) which sum is still on deposit with the Oglethorpe Savings and Trust Co., 120 Bryan street, Savannah, Ga., to the credit of R. J. Nunn, chairman Prize Essay Fund, Medical Association of Georgia.

R. J. NUNN,
Chairman.

The report of the Committee on Necrology was made through its chairman, Dr. E. C. Goodrich.

AUGUSTA, GA., April 20, 1892.

To the Medical Association of Georgia:

GENTLEMEN:—Your Committee on Necrology, in making their report, desire to say, that they found their duty somewhat more difficult than usual, as there has been no complete report on this subject in two or three years. It has been always the custom of this committee to find out what members have died during the past year and either write short eulogiums on their lives, etc., or have the same done by some intimate friend of the deceased. We find a good many names on the "In Memoriam" roll of whom no mention has ever been made. Some of this we can rectify and have succeeded in having notices of some written, but it has been impossible in a good many cases. We have endeavored to make the report as complete as possible, and according to custom we have placed in the proper place in the volume of "Transactions" the tribute of a good many of our departed ones. The past two or three years have thinned our ranks of a goodly number of our most distinguished—some of them world-renowned—brothers. Any society would feel honored to have their names on its roll. They have honored us with their friendship. They have taught us much by their genius, and their memory will always remain fresh with us. We can never forget them. Their life-work remains with us and they do now rest from their labors.

Respectfully submitted,

E. C. GOODRICH, Chairman,
W. H. DOUGHTY, JR.,
F. M. RIDLEY,
J. B. S. HOLMES,
Committee on Necrology.

Dr. Calhoun moved that the name of J. L. Slaughter be added to the necrological list. Motion seconded and carried.

Dr. K. P. Moore offered the following resolution, which was adopted:

Resolved, That this Association learns with regret of the illness of Dr. J. S. Todd, of Atlanta, and we tender to him our warmest sympathy and sincerest wishes for his speedy recovery.

Dr. Nunn moved that the name of William P. Beasley be placed on the roll of honorary members. Carried.

Dr. Goodrich moved that a volume of the Transactions be sent to each family of the deceased members. Seconded and carried.

Dr. J. G. Hopkins offered the following amendment to the Constitution:

Resolved, That Section 1, Article III, of the Constitution relating to membership be changed so as to read: "Any regularly educated white physician, who resides within the limits of this State, who is a graduate of a regular medical college in good standing, and who adopts and conforms to the Code of Ethics of the American Medical Association, shall be eligible to membership in this body." (To lay over for one year).

The following resolution was also read and adopted:

Resolved, That we, the Board of Censors of the Medical Association of Georgia, in session at Columbus, April 20, 21, and 22, 1892, do, by authority vested in us by Article 9, Section 2, of the Constitution of this Association, strike from the roll of members the name of J. W. Janes, of Atlanta, for violation of Paragraph 4, Article 1, Chapter 2, of the Code of Ethics of this Association.

B. R. DOSTOR,
Chairman of Board of Censors.

Dr. A. A. Smith, of Hawkinsville, read a paper entitled "Gunshot Wound of the Stomach with Report of a Case."

Discussed by Drs. Duncan, Westmoreland, Davis, Lallerstedt and Heard.

Dr. R. O. Cotter, of Macon, followed with a paper on "Some Practical Points in Reference to Eye Strain."

Dr. Willis F. Westmoreland, of Atlanta, read a paper entitled "Plaster of Paris in Surgery."

Discussed by Drs. Currie, Heard, Perdue, and discussion closen by the essayist.

Dr. R. J. Nunn, of Savannah, read a paper entitled "Preliminary Observations on the Behavior of Iodine in the Presence of Camphor, Menthol, Thymol," etc.

The President then announced the Nominating Committee as follows:

M. L. Currie, Montgomery.	J. G. Hopkins, Thomas.
A. C. Bloomfield, Clarke.	T. L. Lallerstedt, DeKalb.
R. J. Nunn, Chatham.	R. O. Engram, Macon.
H. L. Battle, Jefferson.	B. R. Dostor, Early.
P. R. Cortelyou, Cobb.	C. C. Trimble, Twiggs.
R. H. Taylor, Spalding.	H. V. Brown, Houston.
F. M. Ridley, Troup.	W. L. Fitts, Carroll.
A. A. Smith, Pulaski.	O. T. Kenyon, Webster.
Mark O'Daniel, Bibb.	T. B. Davis, Coweta.
A. R. Royal, Wilcox.	F. D. Patterson, Stewart.
H. Perdue, Pike.	W. B. Cheatham, Terrell.
R. J. Chappell, Laurens.	H. B. McMaster, Burke.
M. B. Hutchins, Fulton.	J. T. VanHorne, Walton.
S. S. Gaulden, Brooks.	W. B. Hardman, Jackson.
R. E. L. Barnum, Stewart.	T. O. Powell, Baldwin.
E. C. Goodrich, Richmond.	W. B. Tate, Pickens.
V. D. Lockhart, Banks.	W. E. B. Davis, Floyd.
J. M. Spence, Jr., Ware.	J. A. Weaver, Marion.
J. J. Hill, Wilkes.	R. D. Jones, Chattooga.
C. D. Hurt, Muscogee.	J. W. Neal, Telfair.
L. B. Hawkins, Sumpter.	E. P. Ham, Hall.
R. L. Tye, Henry.	L. E. Brown, Putnam.
W. C. Wimberly, Clay.	E. L. Bardwell, Talbot.
T. D. McKown, Walker.	J. E. Douglas, Randolph.

On motion the Association adjourned till 9:30 A. M. Friday.

THIRD DAY—MORNING SESSION.

APRIL 22, 1892.

The Association was called to order at 9:30 A. M., by the President.

On motion the reading of the minutes was dispensed with.

The President called for the report of the Nominating Committee. The following nominations were made and accepted by the Association:

President, Dr. A. A. Smith, Hawkinsville.

First Vice-President, Dr. George J. Grimes, Columbus.

Second Vice-President, Dr. R. H. Taylor, Griffin.

Treasurer, Dr. E. C. Goodrich, Augusta.

Censors, Drs. W. O'Daniel, J. G. Hopkins.

Place of next meeting, Americus.

Dr. E. C. Goodrich then submitted his report as Treasurer as follows:

To the Medical Association of Georgia:

GENTLEMEN—I beg leave to submit my annual report as Treasurer as follows:

DR.

To balance in treasury as per last report	$ 776 88
To amount collected during the year (dues)	654 00
To amount collected during the year (fees, new members)	260 00
Total	$1,690 88

CR.

By amount paid out during the year, as per accompanying vouchers	$ 696 20
Leaving a balance in the treasury of	994 68
Total	$1,690 88

Respectfully submitted,

E. C. GOODRICH, Treasurer.

On motion the report was adopted.

Dr. Moore then moved that the Association extend its sincerest thanks to Dr. Goodrich for his most efficient work as Treasurer of the Association for the last five years.

Seconded and unanimously carried.

Secretary Howell read his annual report as follows, which, on motion, was adopted:

To the President and Members of the Medical Association of Georgia:

GENTLEMEN—I have the honor to submit this, my annual report, for the year ending this day, April 20th, 1892.

I had three hundred copies of last year's transactions printed at a total cost of $304.40.

Following is an itemized account:

Dan. H. Howell in account with Medical Association of Georgia.

CR.

By stamps in April, '91	$ 1 00
By freight on books from Ex-Secretary Moore, May, '91	3 58
By stamps in May, '91	55
" " " June, '91	35
" " " July, '91	48
" " " August, '91	25
" " " September, '91	35
" " " October, '91	29 40
" " " November, '91	60
" " " December, '91	30
" " " February, '92	75
" " " March, '92	3 75
" " " April, '92	30 00
By postal cards in February, '92	1 50
By commission on back dues	3 60
By printing Transactions	304 40
" " wrappers for transactions	1 75
" " letter circulars for programme committee	32 00
" " " " " committee on new membership and addressing envelopes for both committees.	14 62
By stationery for Secretary	12 25
	$441 48

DR.

To cash from Treasurer in September, '91	$ 65 00
" " " " " November, '91	275 00
" " " " " April, '92	30 00
To sale of one copy of Transactions	1 25
To dues from Dr. G. R. West	3 00
" " " " W. P. Nicolson	3 00
" " " " H. P. Cooper	3 00
" " " " J. S. Todd	3 00
" " " " J. G. Earnest	3 00
" " " " W. S. Elkin	3 00
" " " " C. C. Greene	12 00
" " " " E. Van Goidtsnoven	3 00
" " " " E. L. Connally	6 00
" " " " T. D. Love	9 00
" " " " W. C. Jarnagin	12 00
" " " " T. S. Powell	9 00
By balance due Secretary	1 23
	$441 48

As will be seen in my report, $46.62 was spent by me, which did not come under my province. I wrote to the chairman of both the programme committee and committee on new membership in reference to sending out programmes, etc., and at their request I had directed and mailed 2,500 circulars and programmes, besides sending out circulars for chairman of committee of arrangements to exhibitors. The result of our combined efforts was that we had the largest attendance of any meeting in years. We had an addition of sixty-one new members, which was the largest in the history of the Association.

Respectfully submitted,

DAN. H. HOWELL,
Secretary.

The President announced the following gentlemen as delegates to the American Medical Association, June 7, 1892:

H. L. Battle,	S. B. Hawkins,	A. W. Calhoun,
F. W. McRae,	W. B. Tate,	D. H. Howell,
Eugene Foster,	James M. Hull,	T. R. Wright,
K. P. Moore,	Mark H. O'Daniel,	W. F. Holt,
J. J. Hill,	A. A. Smith,	J. G. Hopkins,
W. E. B. Davis,	W. O'Daniel,	B. R. Dostor,
T. O. Powell,	J. H. Bryan,	P. R. Cortelyou,
L. G. Hardman,	R. J. Nunn,	W. H. Elliott,
S. C. Benedict,	J. W. Bailey,	W. F. Westmoreland
Geo. J. Grimes,	Seth N. Jordan,	W. L. Bullard,
A. W. Griggs,	P. L. Hillsman,	A. C. Blain,
T. M. McIntosh,	H. B. McMaster,	R. H. Taylor,
C. D. Hurt,	J. B. Baird,	J. McF. Gaston,
J. C. Field,	R. O. Engram,	R. E. Griggs,
G. W. Mulligan,	C. D. Roy,	Virgil O. Hardon.

Dr. W. O'Daniel offered the following resolution:

WHEREAS, It has been brought to the attention of this committee that certain methods of electioneering for the officers of this Association have been indulged in, and that these methods are of a political character and derogatory to the dignity of this body and highly reprehensible among scientific men; therefore, be it

Resolved, That such actions be condemned in unmeasured terms, and your committee recommend that in future no such practices be indulged in by any member of this Association.

Dr. Hopkins moved that the resolution be adopted. Carried.

The committee to whom was referred the resolution of Dr. Cortelyou, reported as follows:

GENTLEMEN—Your committee appointed to investigate the advisability of changing the manner of election of officers of this Association, do recommend that the present law now in vogue be still retained.

Respectfully submitted,

W. O'DANIEL, Chairman.
R. J. NUNN,
B. R. DOSTOR,
R. O. ENGRAM,
A. W. GRIGGS.

On motion the report of the committee was accepted and adopted.

The President appointed the following committees:

COMMITTEE ON PUBLICATION:—James B. Baird, Chairman; Dan. H. Howell, *ex officio;* E. C. Goodrich, W. P. Nicolson, W. S. Kendrick, A. W. Calhoun.

COMMITTEE ON NECROLOGY:—F. M. Ridley, Chairman; J. B. S. Holmes, Mark H. O'Daniel, R. J. Nunn.

COMMITTEE OF ARRANGEMENTS:—S. B. Hawkins, Chairman; A. L. Miller, E. K. Bozeman.

COMMITTEE ON PRIZE ESSAYS:—Eugene Foster, Chairman; J. C. LeHardy, Robert Battey, W. A. Love.

COMMITTEE ON PROGRAMME:—J. F. Lancaster, K. P. Moore, J. McF. Gaston, J. A. Dunwoody, L. G. Hardman, W. H. Doughty, Jr.

COMMITTEE ON NEW MEMBERS AND CORRESPONDENCE.—E. K. Bozeman, Chairman; C. D. Hurt, H. Perdue, A. C. Blain, C. D. Roy.

The President announced that he had appointed as Orator for the next meeting Dr. Frank M. Ridley, of LaGrange.

The Board of Censors offered the following resolution:

Resolved, That the name of Dr. Charles A. Brooks, of Americus, be stricken from the roll of Membership of this Association for violation of Paragraph 3, Article 1, Chapter 2, of the Code of Ethics.

B. R. DOSTOR,
Chairman Board of Censors.

The above resolution was based on the following clipping from a newspaper:

Charles A. Brooks, M. D., (Graduate of Bellevue Hospital Medical College, N. Y., twice graduate of N. Y. Post Graduate Medical School, Chief Surgeon S. A. M. R. R. etc.,) offers his professional services as a general practitioner to the citizens of Americus and surrounding country. Special attention given to operative surgery, including the treatment of hemorrhoids, fistula, stricture, catarrh and all diseases of anus, rectum, genito-urinary system and nose and throat. Office in Murphy building, Lamar street. Connected by speaking tube with Eldridge's Drug Store. Calls should be left or telephoned there during the day. At night call at residence on Lee street, or telephone No. 77. apr29tf

On motion the resolution was adopted.

Dr. Baird, chairman of the Auditing Committee, made the following report:

GENTLEMEN—Your Auditing Committee beg leave to report that they have examined the books of the Treasurer, and find them correct, with a balance on hand of $994.68.

Your Committee recommend that an honorarium of $100 each, be paid the Secretary and Treasurer.

JAS. B. BAIRD,
R. J. NUNN,
R. H. TAYLOR,
} Committee.

On motion the report was adopted.

Dr. W. B. Hardman, of Harmony Grove, contributed a paper entitled "Eclampsia after Delivery, with Report of Cases."

Dr. A. G. Hobbs, of Atlanta, followed with a short paper on "Some Remarks on Tonsil Excisions, with Presentation and Description of New Instruments."

Discussed by Dr. Cotter.

At this juncture Secretary Howell called the attention of the Association to the fact that the Auditing Committee had failed to bring up the matter of compensation of the official stenographer, and he desired to ascertain the feeling of the members in regard to the same.

Dr. Ridley moved that the expenses of the official stenographer be paid without limit. Seconded.

Dr. Calhoun moved, as an amendment, that the honorarium of the Secretary be increased to cover the expenses of the stenographer, whatever they might be. Seconded.

Dr. R. J. Nunn then offered the following as a substitute:

***Resolved*, That the honorarium of the Secretary be increased to $230, he paying the stenographer.**

Seconded.

After a spirited discussion participated in by Drs. Moore, McIntosh, Westmoreland, W. O'Daniel, Nunn and Ridley, the substitute was adopted.

Dr. W. O'Daniel moved that hereafter all bills come up in the regular order, the vouchers handed to the President, and then paid. Seconded and carried.

Dr. J. McF. Gaston, of Atlanta, read a paper entitled, "Extirpation of the Rectum for Carcinoma."

Dr. S. B. Hawkins, of Americus, here appealed from the decision of the Board of Censors relative to the expulsion of Dr. C. A. Brooks, and, after explaining the matter satisfactorily to the Association, Dr. Brooks was, on motion, reinstated, and his name added to the roll of membership.

Dr. J. W. Hallum, of Carrollton, read a paper on "The Treatment of Hemorrhoids by Carbolic Acid Injections."

Discussed by Drs. Gaston, Moore, Hill, Hurt, and discussion closed by the essayist.

The Board of Censors reported favorably on the following names for membership and they were duly elected:

Saml. L. Gaulden.	A. F. Harrington.	J. W. Neal.
W. W. Stewart.	D. D. Quillian.	R. D. Jones.
W. J. Mathews.	W. T. Gautier.	J. W. Griggs.
M. F. Crumley.	W. E. B. Davis.	W. F. Culpepper.
C. W. Barrier.	H. A. Wall.	J. A. Weaver.
Wesley Jefferson.	G. B. Williams.	J. T. Pattillo.
W. F. Walker.	E. K. Bozeman.	Hugh Hagan.
W. B. Hardman.	G. T. Miller.	W. A. Crow.
A. C. Moreland.	R. R. Kime.	Seth N. Jordan.
R. W. Butts.	Ross P. Cox.	A. R. Royal.
W. R. Googe.	J. D. Paige.	J. F. Stewart.
H. W. Terrell.	W. T. Simpson.	T. B. Davis.
R. E. Griggs.	W. J. Bryant.	S. H. Green.
Thos. S. Mitchell.	M. B. Hutchins.	C. D. Roy.
J. T. Van Horne.	J. M. Hatchett.	J. H. Bryan.
W. W. Bruce.	R. E. L. Barnum.	O. T. Kenyon.
F. D. Patterson.	J. N. Hogg.	H. W. Ilderton.
V. P. Stevens.	C. M. McDonald.	J. H. Sims.
S. E. Young.	E. P. Ham.	O. G. Singleton.
E. H. Sims.	S. E. Drewry.	C. Evans Johnson.
Sam. G. Noell.		

Adjourned.

THIRD DAY—AFTERNOON SESSION.

The Association re-assembled at 2:30 P. M., and was called to order by the President.

Dr. Mark H. O'Daniel offered the following resolutions:

Resolved, That we, the Medical Association of Georgia, do most earnestly and sincerely express to the medical profession of Columbus, her Mayor and officials, as well as her citizens, who have in anywise contributed to the success and well-being of this Association and assisted in making the visit and stay of each and

every member so pleasant and agreeable, our most profound and heartfelt thanks, and our warmest assurances that we have been well fed and watered and enjoyed to our utmost capacity the gracious privileges of their fair and beautiful city.

Resolved, That the Association do thank Dr. Howell for the earnest manner in which he has worked for the Association, and his thoughtful consideration in engaging and bringing into the body a stenographer, and thus making the transactions more complete and full, in reporting the various discussions, etc., in the Association.

Both resolutions were adopted.

Secretary Howell read a telegram from Dr. J. W. Bailey, of Gainesville, regretting his inability to be present.

The following papers were read by title:

1. Ligation of the Left External Iliac Artery for Circumscribed Traumatic Aneurism of the Upper Third of the Femoral Artery—Gangrene of the Leg—Death on the 40th Day. By Dr. H. J. Williams, Macon.

2. So-called Typho-Malarial Fever. By Dr. W. P. Williams, Waycross.

3. Hemeralopia or Night Blindness. By Dr. S. Latimer Phillips, Savannah.

4. Typhlitis, and Report of a Case. By Dr. S. M. Mathews, Quitman.

5. Some of the Fads and Fancies of the Medical Profession. By Dr. J. C. LeHardy, Savannah.

6. A Combination of Carbolic Acid and Camphor as an Antiseptic. By Dr. William Perrin Nicolson, Atlanta.

7. Fevers. By N. M. Darden, M. D., Norwood.

8. Action of Fibroid Tumors After the Menopause. By Dr. Virgil O. Hardon, Atlanta.

9. Lithotomy, with Report of Cases. By Dr. W. S. Elkin, Atlanta.

10. Chorea. By Dr. Hugh Hagan, Atlanta.

11. Report of Perineal Sections for Stricture, Stone in Bladder and Cystitis. By Dr. F. W. McRae, Atlanta.

12. How to Best Conduct Labor to Prevent Injuries to the Os Uteri and Perineum. By Dr. A. W. Griggs, West Point.

13. Gunshot Wounds of the Eye—Unusual Results. By Dr. George A. Wilcox, Augusta.

14. Radical Surgery the Best Surgery in the Treatment of Extensive Lacerated and Contused Wounds of the Extremities. By Dr. E. H. Richardson, Atlanta.

15. Report of a case of Catalepsy, and Treatment. By Dr. A. Sydney Johnson, Bowman.

16. Flexion of Cervix, Causes, Effects and Treatment. By Dr. J. W. Bailey, Gainsville.

17. The Relation and Dependences Existing Between the Specialist and the General Practitioner of Medicine and Surgery. By Dr. J. W. Griggs, West Point.

18. Typho-Malarial Fever. By Dr. J. W. Duncan, Atlanta.

19. Typhlitis. By Dr. Wm. O'Daniel, Bullard.

20. Membranous Croup, with Report of a Case Successfully Treated by Tracheotomy. By Dr. R. M. Harbin, Calhoun.

21. The Diagnosis of some Abdominal Tumors Supposed to be Ovarian. By Dr. Jas. A. Goggans, of Alexander City, Ala.

INSTALLATION OF NEWLY ELECTED OFFICERS.

President Mulligan, in introducing his successor, said:

GENTLEMEN:—I have the pleasure and honor of introducing to you your newly elected President, Dr. A. A. Smith, of Hawkinsville.

Dr. Smith, on rising, was received with applause. He said:

Mr. Chairman and Gentlemen of the Georgia State Medical Association:

Words are totally inadequate to express my gratitude

for the honor which you have conferred upon me on this occasion. I have this to say, that in my official capacity if I should err, it will be an error of the head, and not of the heart.

Again thanking you for the honor and kindness which you have extended to me on this occasion, I express the hope and sincere desire that we may all meet again at Americus, in April, 1893.

There being no further business, either scientific or otherwise, the Association, on motion, adjourned to meet at Americus on the third Wednesday in April, 1893.

The following is a list of members as appear upon the registration list as in attendance.

C. H. Colding.	V. D. Lockhart.	J. M. Spence, Jr.
John J. Hill.	E. K. Bozeman.	J. C. Field.
J. W. Mitchell.	Geo. J. Grimes.	C. D. Hurt.
S. B. Hawkins.	R. L. Tye.	W. C. Wimberly.
T. D. McKown.	W. F. Gann.	J. G. Hopkins.
Jas. B. Baird.	T. L. Lallerstedt.	R. O. Engram.
G. W. Mulligan.	B. R. Dostor.	W.F.Westmoreland
H. W. Ilderton.	W. G. England.	A. R. Royal.
T. M. McIntosh.	W. H. Elliott.	W. R. Googe.
H. Perdue.	R. J. Chappell.	A. F. Harrington.
M. B. Hutchins.	J. M. Hatchet.	W. T. Simpson.
C. M. McDonald.	S. S. Gaulden.	J. B. Pendergrass.
J. H. Bryan.	W. W. Bruce.	R. O. Cotter.
R. E. L. Barnum.	G. B. Williams.	E. C. Goodrich.
P. H. Thompson.	K. P. Moore.	C. C. Trimble.
W. C. Humphries.	H. A. Brown.	W. L. Fitts.
W. J. Bryant.	W. F. Walker.	O. T. Kenyon.
T. B. Davis.	F. D. Patterson.	W. B. Cheatam.
H. B. McMaster.	J. F. Stewart.	R. R. Kime.
J. T. Van Horne.	W. B. Hardman.	R. M. Butts.
S. H. Greene.	W. A. Crow.	H. W. Terrell.

W. O'Daniel.	M. L. Currie.	A. C. Blain.
Jos. C. Bloomfield.	J. E. Douglass.	P. S. Clark.
J. A. McKown.	H. R. Mooney.	R. J. Nunn.
H. L. Battle.	P. R. Cortelyou.	J. W. Duncan.
A. W. Calhoun.	R. H. Taylor.	Jas. A. Beasley.
W. L. Bullard.	F. M. Ridley.	J. W. Hallum.
A. A. Smith.	C. H. Richardson.	Mark H. O'Daniel.
V. P. Stevens.	J. A. Weaver.	H. A. Wall.
J. T. Pattillo.	A. W. Griggs.	R. E. Griggs.
D. H. Howell.	S. E. Drewry.	J. M. Kelley.
R. D. Jones.	J. H. Heard.	E. L. Bardwell.
J. W. Neal.	S. B. Poland.	E. P. Ham.
W. F. Culpepper.	W. J. Mathews.	S. E. Brown.
T. S. Mitchell.	O. G. Singleton.	C. W. Barrier.
M. F. Crumley.	J. A. Goggans.	A. G. Hobbs.
W. J. Love.	W. B. Tate.	S. E. Young.
C. Evans Johnson.	J. McF. Gaston.	T. O. Powell.
W. E. B. Davis.	W. T. Gautier.	Wesley Jefferson.
G. T. Miller.	Seth N. Jordan.	J. D. Paige.
C. D. Roy.	J. M. Hatchett.	J. H. Sims.
E. H. Sims.		

DAN. H. HOWELL,
Secretary.

A. A. SMITH,
President.

PRESIDENT'S ADDRESS.

BY G. W. MULLIGAN, M. D., WASHINGTON, GA.

Gentlemen of the Medical Association of Georgia:

The forty-three years which have elapsed since the organization of the Medical Association of Georgia, have been years characterized on the one hand by marvelous advances in the arts and sciences, and on the other by an independence of thought, so bold, so active, so radical in its tendency as to have brought on the ablest thinkers of the past half century the charges of skepticism and infidelity.

On the first of these contrasting features we will not dwell, for the evidences of advance are familiar to you all, and furthermore, if we narrow the discussion down to our own profession, which I shall do, a simple description of the many improvements would require more time than I have at my disposal here to-day. These improvements have not only made a good impress on our profession, and stimulated investigation, but they have given to medicine a positive and material advance, which, in many instances, renders practice almost a certainty. The other of these contrasting features can be dismissed in an equally summary manner, and yet, *per se*, it is a subject of the most attractive interest, and well worth the profoundest study of all who have the least concern for the advancement of mankind to a higher degree of social, moral and intellectual perfection than that which now obtains.

Much of this bold and active thought is speculative in its nature, but a great deal of it is based on a rigid induction of observed phenomena, and the facts presented in

such a form as to have changed the entire aspect of many of the physical sciences.

So sweeping has it been, as to have shaken systems and theories which were before considered immovable. It has unhinged beliefs which were accepted as fixed—it has caused a distrust of others that were assumed to be equally as secure—it has wrought the wildest confusion among the theological and metaphysical conceptions of the evolution of the universe and man's place in nature. In short, it has developed so many antagonistic opinions, and filled the air with so much distrust and suspicion of everything the mind can lay hold of, that we may well ask ourselves if the charges, to which we have alluded, are not justly founded?

Now, amid the violent eruptions and upheavals of long standing notions, amid the persistent attacks on all forms of opinions, we may well ask, is there any stability in medicine? Is the medium, even of to-day, based on any solid or permanent foundation? Is its future assured, or is it now, and must it always be, a shallow empiricism dependent for its form upon caprice and fashion, and relying for its support upon ignorance and superstition? It seems to me that a little reflection will show that the medicine of to-day is the legitimate outcome of its past failures and successes, its incongruous mixture of truth and error, and if judged by the past, its future progress is assured beyond all question.

At the very outset of this discussion, let me say, do not understand me as condemning the past for its many errors and failures, or as claiming that better plans might have been adopted or greater successes attained. With the mental tendencies of the times, with the amount of learning and the degree of civilization of the age, it was impossible that any condition of things could have obtained different from that which history discloses.

Now, when we assert that the scientific methods of investigation adopted during the last quarter of a century was the determining cause of the evolution in medicine, it is made in no spirit of reproach or arrogance, but simply to illustrate the causes which have delayed progress, and to warn us against similar errors in the future. The present advanced position of medicine enables us to point out many of the errors of the past, and while we hold them up to view it may be well not to forget that our successors, in their turn, may show errors in us, as great as those we now see in our ancestors. Therefore, a decent regard for our own reputations would suggest a becoming modesty, rather than a too confident assurance in the stability of the medicine of to-day.

To every thinking mind it is evident that medicine had its origin in the instinctive desire of man to relieve himself or his fellows from pain and death, and hence it must have been coeval with man himself. Now, for this purpose he selected and applied such simple remedies as experience and tradition had shown to be of service. This, however, was the art alone. Science was not brought to bear, for none existed at that time, nor could there have been any until methodical research had formulated a system. Thus it is, as a matter of fact, that art, not only in medicine but in every department of knowledge, always precedes and antedates science. This is as it should be in our profession, for the physician is daily brought face to face with emergencies that demand prompt action to avert pain and death, and hence cannot wait for science to establish its conclusions and furnish data which shall be a reliable guide in these emergencies. Then, in so far as art relies wholly on empiricism, or acts on probabilities, it is in advance and at variance with science, whose methods admit no uncertain elements. So we see that science comes constantly to the aid of art—points out its mistakes, furnishes correct

methods of investigation, gives it instruments of precision and agents of defined potency, and supplies innumerable aids and means of exact information. In this sense, then, science is constantly in advance of art, and if we will keep this fact continuously in view, we will avoid much confusion of thought.

The principal, though not the exclusive means by which we arrive at truth in the physical sciences, consist in observation, experiment and comparison, and from inferences thus drawn, we arrive at a correct knowledge of the phenomena under investigation.

This constitutes the inductive method, first formulated by Bacon. It differs from the deductive method of reasoning, in that it proceeds from effects to cause, while the deductive proceeds from cause to effects. The inductive method starts with facts; the deductive starts with ideas. Both, however, involve a process of reasoning, neither of which are absolutely correct, and hence require verification; both are of paramount service in the study of medicine, but the inductive method occupies, by far, the most prominent position of the two.

Observation, of course, is the foundation of all knowledge, the basis of all intelligent action, but observation alone merely gathers material, simply enables us to say of a disease, for instance, that it exists in a definite form. It teaches us nothing of the causes or relation of phenomena, nothing of the conditions they are subject to, nothing of the objects which they in turn modify, nothing, in short, of the exact nature of the processes observed, and unless founded on exact and positive knowledge, observation is of little avail.

Medicine, therefore, without the assistance of the deductive method of reasoning, must have inevitably remained where it was brought by the Alexandrian school of empirics, who denied the validity of reasoning and renounced all

search into the cause and nature of disease, who abandoned the study of the structure and functions of the body, and boldly declared that it was only necessary to observe external phenomena and by experience alone discover what was the nature of disease, and what drugs were necessary in relieving symptoms.

They were on the right line, but their error consisted in stopping short of a complete induction, and when, therefore, their rivals, the dogmatists, asserted that this knowledge was only prerequisite, they were, scientifically speaking, in advance of the empirics; but when they abandoned the teachings of their master, Hippocrates, and asserted that reason alone was adequate to all the requirements of medicine, they fell into errors as great as those of the empirics. In justice, then, to the empirics, let it be proclaimed that they reduced observation to a scientific method, which is fundamentally that of to-day, and thereby rendered a far greater service to our profession than all the speculations of the dogmatist. No wonder then when the reaction took place against the medicine of the times, that the empirics easily distanced their rivals, and for centuries remained sole masters of our art. Inasmuch, then, as knowledge gained by observation and experiment is inadequate to the needs of medicine, we make another advance in the step of comparison. Here science brings in as auxiliaries classifications, analogies and statistics, and by these aids shows their true value and uses. It further guards against inaccuracy by declaring that the facts compared must be of the same kind, and as nearly identical as is possible in the nature of things. It shows that they must be brought together in sufficient numbers to correct the errors of individual observation, and determine between constant and accidental sequences and coincidences, and point out by exclusion the efficient cause or causes, in the action of a machine so complicated as that of the human body, both in health and disease.

Now, it is from a neglect of this scientific principle, that so many errors have crept into all of our systems of therapeutics, and it is in compliance with these simple requirements of science, that so much of the merciless therapeutics of the past have swept away.

Again, science forbids all ambiguity, interminology, definitions and descriptions, and demands that a technical language shall be employed which represents actualities, and shall be devoid of all surmise and not a cover for our own ignorance.

Even the nomenclature of this advanced period is in open violation of this principle of science, and the amount of mischief accruing therefrom is almost beyond calculation, since it is well nigh impossible to secure anything like precision of thought by the employment of a terminology so notoriously inaccurate, ambiguous and unsatisfactory. Again, science condemns all tautology—reasoning in a circle—usages that only serve to throw dust into the eyes of the unsuspecting and adds nothing to our knowledge except a useless and stilted verbasity. Science puts us on guard against the theories and teachings dictated by personal interest or enthusiasm unsupported by facts. It cautions us against the hasty acceptance of novelties, but at the same time warns us that such novelties are not to be rejected without a rigid examination into their importance and value. It does not exclude theory and hypothesis, for without them we could hardly form any correct idea of the living body—of the condition of a patient or the nature and action of remedies. At the same time, however, it most emphatically declares that such theories shall not be taken for more than they are worth, and until verified, must not be accepted as established truths. Hence, it is plain, then, that we should only accept them as tentative propositions which for the time explain things, the nature of which was previously inexplicable, and they must be

held subject to review by the light of increasing knowledge, and when and wherever employed must be entirely subordinated to known facts.

We come now to what I consider the great overshadowing drawback to all scientific investigation. I mean the projection of self into our studies and our work. It blinds observation and gives erroneous interpretations to experiments. It interferes with reason and renders judgment nugatory. It is the foundation of nearly all the medical fallacies past and present, and it is at the bottom of all the superstitions, mysticisms and vain conceits of the early and middle ages, and can be seen in all the special theories, which in times past, so bitterly tried the patience of our ancestors, and in the present, remain to block the wheels of progress.

Another fruitful source of error was the introduction of metaphysics into the study of life, both in health and disease. This unscientific method encouraged false conception of things, and thwarted accurate investigation. It is now, and always has been, a never ending source of confusion of thought, and has brought contempt upon the idea of methodical progress in the evolution of medicine. Throughout the entire history of medicine, its baneful influence is felt, but it was more marked in those times when the philosophy of the schools was considered the most laudable occupation in which the human mind could engage. It can be seen in all the theories which held such potent sway in the medicine of the past, and in illustration of the fact, we have only to look at the constantly shifting hypothesis offered to elucidate the mysteries of life. The theory of Paracelous that a little devil resided in the stomach and presided over digestion, had its origin in these metaphysical notions, and Von Hemont adopted the same theory, but placed a subordinate demon in each organ. Next came the "Anima" of Stahl, a vital principle resid-

ing outside of matter. In turn Haller modified this hypothesis by contending that vitality only existed in organized bodies, viz: irritability of muscles and sensibility of nerves.

Following in the footsteps of these hypotheses, is the comparatively modern school of vitalists, which has assumed several distinct phases of theory, and out of which has grown Brunonianism modified by Brousais, and still further modified by the cellular theory of Vischow, which endows each separate cell with irritability, and makes the animal a sum of vital unities, every one of which manifest all the characteristics of life.

You may disguise it as you will under learned and high-sounding phraseology, but these theories are nothing but metaphysical conceptions, incapable of proof, yet some of them, after a fashion, serve to explain the phenomena of life, but all of them unscientific—because, based on pure abstraction, and all of them embracing the illogical error of explaining the known by the unknown, the simple by the complex.

Another allied source of error is in the conception of the nature and the causes of disease, which has existed from all antiquity, and herein lies a newer source of mischief, for therapeutics are now, and have always been, based on the prevailing theories of the causes of disease.

We will pass by the absurd and ridiculous notions which attributed disease to supernatural causes, such as the anger of the gods, the malign influence of the stars, etc.

In nearly every prominent theory we see the idea that disease was something added to the body, and hence ought to be got rid of. At one time it was humoral pathology, and during its long reign there was more blood poured out in the treatment of diseases than was lost at Gettysburg and Hoen-Lynden. At another, it was mechanical and chemical forces acting against the healthy functions of the body, and at once. Salivation, under the idea that two diseases

could not dominate the system at the same time, was the prevailing practice, and saus teeth and saus constitution was the fate of the patient who was lucky enough to survive the barbarous therapeutics of the times. A little further on and it was an effort of nature to expel some noxious vapor, some morbid material, and forthwith the skin and kidneys, in short, all the emunctories of the body, became perennial fountains that never ran dry. This brings us up to the present germ theory of disease, which teaches that we are literally surrounded and infested by bugs—bugs in the air we breathe, bugs in the food we eat, bugs in the water we drink, in short bugs everywhere. Now I will not tackle these bugs without a microscope, neither will I criticise them, but I will throw out this hint—poison, kill, destroy the bugs. But, I would say further, beware, and don't kill your patient while engaged in the laudable undertaking.

In looking back through the gray vista of time at the history of medicine and its many mutations, it is clearly seen wherein error has been committed by ignoring the laws of science, and wherein it has been avoided by conforming to its established rules. It is unnecessary to enter into a detailed account of it here, and hence I merely purpose to hold up to view a few prominent circumstances which are at variance with scientific medicine, and therefore impediments to its progress.

One of the chief impediments, both in ancient and modern times, is a slavish deference to the dictates of authority. Before the renaisance, it could not have been otherwise, for education, such as it was then, was limited to a few favored persons, whose surroundings were such as to command its advantages; and hence, it is with no spirit of reproach or fault-finding that the matter is referred to here. For more than ten centuries medicine remained in a state of complete stagnation, due almost entirely to the slavish

deference paid to authority. The mightiest enemy, and the one which has done the greatest harm to every branch of knowledge, the world over, has been a want of independence of thought and action. It was this that made our ancestors believe so firmly in the infallibility of Galen and Hippocrates, which to us seems so absurd and ridiculous. It was this that kept the physicians of those remote times from seeing things as they actually existed, and caused learned anatomists to assert that there were openings between the ventricles of the heart, when none could be seen. They got over this, however, by inventing the theory of invisible pores, and preferred to doubt their own senses, rather than break faith with Galen—whose reign gave laws to medicine for ages—and with whom, learned professors said that they had rather err, than be right with other physicians.

Now, I have always thought that we should regard, with the profoundest gratitude, that splendid quack, Paracelsus; for it was his herculean blows that shook the throne of Galen and Avacenna to its centre, and the good effects of his teachings are felt down to the present time.

In the beginning of the sixteenth century, Paracelsus assumed the chair of medicine at Basle, and he at once publicly burned the works of Galen and Avacenna, asserting that the latchets of his shoes possessed more knowledge than these distinguished physicians. He proclaimed himself the king of all physicians, and roundly asserted that his very beard possessed more learning than all the schools.

The ridiculous effrontery of this magnificent mountebank was, undoubtedly, assumed for selfish motives; but the good which he accomplished was far-reaching and efficient in its influence. At one bound he well-nigh revolutionized medicine, by calling to his aid the laws of chemistry and physics in the investigation of life, and thereby did more to

break the shackles of authority than any one of ancient or modern times.

Thus it was with medicine at the beginning of the sixteenth century; but, happily, at this time there was ushered in a new era of thought, which brought about a more healthy state of opinion, and, in conjunction with a greater diffusion of knowledge, rendered it impossible for thinking minds to longer remain spell-bound at the dictates of authority. Now, it was this spirit of independence that actuated Conheim, following in the wake of Waller's original investigations, to make the statement that in certain pathological conditions the white-blood corpuscles passed through the coats of the capillaries. Now, this was neither denied nor affirmed, but in the true spirit of science hundreds of microscopes were brought to bear on inflamed tissue to test the truth or falsity of the proposition. So it was with the deductions of Tebereich, who first suggested that the coal-tar series might contain valuable remedial powers, and at once science put the proposition to the test, and thousands of stomachs were brought into requisition. The result was we now have a powerful fire brigade and a score of analgesics.

Turning now for a moment to the future of medicine, what shall we say of it? Shall we take a pessimistic view of its future progress? By no means; for it seems to me that so long as she adheres to the methods established by physical science, her progress is assured, for since she entered the new field of positive knowledge, golden fruit has been garnered. Though at times medicine has been retarded by error, superstition and dogmatism, upon the whole, however, its progress has been steady and straightforward, until its has culminated in the splendid position which it occupies to-day. Then, there need be no fear as to the future, nor need we reproach ourselves, or our predecessors that the advance has not been more rapid.

Just to the extent that errors, such as those to which we have adverted, hold sway, will progress be hampered; but in every step taken, there is some germ of truth which will yet bring forth more abundant fruit. Great generalizations are arrived at by gradual and systematic approaches—not by one complete demonstration—each approach, while it adds materially to the already accumulated stock of knowledge, is only blazing the way for further advance. It is an easy matter to point out the directions which the greatest advances will take in the future; but the mind is dazzled at the contemplation of the brilliancy of the progress. As curious as it may seem, it is in the two departments of clinical medicine—etiology and therapeutics—that the greatest tardiness is observed. In the other departments—such as pathology, diagnosis and prognosis—our knowledge, though by no means perfect, is more advanced than the other two; and it is a striking illustration of the principle which we have tried to elucidate here to-day, that our information is the most exact in those departments where scientific methods have been most strictly adhered to, or where the laws of applied science have been observed. In the first three of these divisions of clinical medicine, the principal means of further advance lies solely in organic chemistry and the physical sciences.

In prognosis, reliance must rest on a more thorough study of the natural history of disease; and I firmly believe that the day is not far distant when the record which we are now accumulating will be rightly formulated by those possessing the requisite skill in generalization, and will prove not only a service, but a reliable guide in the practice of our art.

In therapeutics, the beginning and the end of all our work, there is most to be done, for almost our entire knowledge is based on experiment and observation alone. We are in almost complete ignorance of the action of medicines

and the nature of the changes which they produce in the system, and this cannot be otherwise so long as etiology remains in its present deficient condition. To isolate morbific principles, to ascertain the exact nature of all disease-producing agents, and to learn accurately the changes wrought by them, is the knowledge which we mostly need. The brilliant work of the bacteriologist of our times convinces me that this knowledge is not unattainable, and I have an abiding hope that sooner or later the laws underlying the therapeutic action of medicines will be discovered. That there are such laws, there seems to be no doubt; and as it has been in the past, so it will be in the future, the impediments in the way of searching out these laws will lie less in the intrinsic difficulties of the subjects themselves than in the unscientific methods adopted in their study.

The future, then, is fruitful of promise, and we may well content ourselves with the reflection that centuries upon centuries have been spent in bringing us up to the present advanced position, and therefore we can reasonably hope that each succeeding age will give us a steadily increasing development.

Then let us be patient and hopeful in our work, for in the fullness of time the easier branches of the triad of medicine—physiology, chemistry and pathology—will have done their perfect work, and then a correct system of therapeutics will be produced—the mecca of our hopes. In the past, these hopes have given away to a restless impatience, and the goodly work of centuries has been destroyed by a premature attempt at completion. But now, that medicine has allied herself with the physical sciences, and is partaking of their methods and aiming at their exactness, we may hope for nobler things. In her evolution she has passed the theological and metaphysical stages of development, when fiction, superstition and dogmatic

opinion was succeeded by hypotheses, observations and speculations, and she has at last crossed the threshold and proudly entered upon the positive state of knowledge, which is the culmination of all human information, especially in the physical sciences. And now, what shall we say for medicine in this, her supreme stage of evolution?

We lay no claim to that absolute precision which we observe in the fixed sciences, but we do insist on as close an approximation as the nature of things will admit; and hence I plead for the abandonment of all unscientific methods of reasoning and investigation, and with a still firmer alliance with those principles which in other branches of knowledge have produced such brilliant successes. I plead for a less reliance on the "blind gropings" of empiricism and a still closer affiliation with every method of modern science. I plead for the exclusion of all fallacies and the adoption of every safeguard which may indicate a wrong direction in our studies. I plead for the entire displacement of self in the investigation of life, both in health and disease, and the concentration of all our powers in searching out the laws governing the relation and succession of these phenomena.

OVARIAN CYSTS.

BY J. M. SPENCE, M. D., WARESBORO, GA.

On or about May 1st, 1890, I was called in consultation with Dr. W. P. Williams, of Waycross, fifteen miles west of Waresboro, and on our arrival we found a woman so large that we at once discovered the chair in which she sat must have been constructed especially for her. After resting sufficiently to give time for quieting the excitement caused by such an unusual sight outside of an exhibition (for she would have been the chief attraction of any show), we launched out on the history of her case. All of her ancestry were healthy, with here and there a tendency to scrofula, but not prevalent. Five years prior to our visit she gave birth to twins, attended, however, with great difficulty. An undergraduate M. D. attended her. Her health was apparently good, until becoming pregnant again, twelve months hence. The issue of this second pregnancy was triplets, again enduring a state of prolonged labor and excruciating pain, under the supervision of the same quack. In about two months something began to grow in the region of the right ovary. It grew rapidly for about three years.

She called several physicians, but failing to properly diagnose the case, they treated her for "Tape Worm" and all kinds of tumors. My associate, Dr. Williams, and myself made an examination with the utmost scrutiny, after which we introduced an exploring needle, which on its withdrawal, was found to contain a thick, dark straw-colored fluid, about the consistency of ordinary syrup. The legs and whole lower extremities, infiltrated with water,

her tongue coated, and bowels costive. Infiltration caused by compression of the tumor on the kidneys and ureters. We next took measurement of the abdomen, which was six and one-half feet; and from the pubes to the ensiform appendix the distance was three feet and nine inches. From this can be drawn some idea in what shape this woman was.

We gave her calomel, pulverized rhei, and carbonate of soda in repeated doses, together with iron, strychnine and digitalis for a few days. Delay was impossible, because death would ensue from compression before her system could be built up. Six days later we met and introduced a trochar and canula through the walls of the abdomen, and through the aperture thus made, there came (prepare to be incredulous) seventy quarts of this thick straw-colored fluid. The same treatment was continued at our second visit two weeks later, and at this time twenty-eight quarts of a similar fluid was drawn, together with something that looked like human brains. We left her evidently much improved, she being able to recline on a bed for the first time in five months. On the third trip, which was two weeks later still, we found her condition considerably improved, hence we again tapped, and this time drew thirty quarts of similar fluid, but the trochar would frequently become choked with the brain looking matter discovered after the first operation.

None of the operations shocked her so much as the first, immediately after which we were fearful of fatal results from heart failure; but with digitalis and whiskey we were able to bring about a reaction. We strapped her abdomen with a large tail bandage seam to assist in retracting the abdominal muscles. Her surroundings were very meager, hence she could not be supplied with the needed nourishment, and, as it was a charity case, my associate and myself could not provide her with all she needed, though we did our best. In two weeks longer we hoped and intended to effect a per-

manent and radical cure, but ten days later the king of terrors approached and claimed his victim. At this juncture, when prudence was better than potions, her morbid appetite overcame her and the strong hand of cholera morbus seized her and suddenly rushed her into eternity.

Now, gentlemen, you can realize what an awful case this was. One hundred and twenty-eight quarts of watery fluid drawn from her in the space of six weeks or but little more, and a large amount yet in the abdomen. It is with more than usual pleasure that I note my brother, who so ably assisted in each of these operations, present to hear and, if necessary, verify my report of this phenomenal case.

May Heaven screen me from another experience like this until medical science shall provide an escape from such untimely suffering.

THE RELATION BETWEEN SKIN DISEASES AND THE GENERAL HEALTH.

BY M. B. HUTCHINS, M. D., ATLANTA, GA.

The subject which I have chosen seems timely from the fact that there exists, not alone among the general public, but I fear, to some extent, in the professional mind, views upon the subject of skin diseases which are deceptive to the patient and must result in failure in treatment by the physician. The most common explanation of a skin eruption is that it is a manifestation of "blood disorder." This vague and indefinite disposal of the question shows, on the part of the patient, a too thorough knowledge of the patent medicine literature which pervades the newspapers, periodicals, almanacs and circulars. On the part of the physician, we prefer to believe that this "blood" theory is an extemporized answer to the question of causation, given, as many of our opinions must be given, upon the idea that it is better to tell a patient something rather than nothing at all. For, despite the antiquity of the practice of medicine, we all know that there are yet many diseases the cause of which has not been definitely determined.

I hope to be able to avoid a too free use of technical terms in what follows, and to simply give the views, in general, of many leading authorities upon dermatology, and my own humble opinion, formed in a much more limited experience. Naturally, we seek the causes of skin disease elsewhere, so soon as we become convinced that the "blood" will not suffice. Animal and vegetable parasitic diseases, syphilis, the exanthemata, "new growths" of all kinds—simple or malignant—and diseases which are pretty

definitely known to be due to certain micro-organisms, are excluded, so far as possible, from consideration, and we limit our attention to the purely eruptive skin diseases. A study of the department of "etiology" in works and articles upon skin diseases fail to reveal the origin of the "blood disease" theory. We find a monotonous repetition of the statement that the cause of this or that skin disease is unknown, or an equally monotonous sameness of theory as to its possible causation, with here and there an individual view cropping out. We have had the school of "local origin," probably the product of the elder Hebra's teaching, and the French, (Bazin and Hardy being perhaps the originators), in which various skin eruptions were attributed to the "dartrons diathesis."

The soundest doctrine is that which shows a willingness to admit both internal and external factors as causes in many cases, with the reservation that many originate with only one of these factors present; and the large majority with absolutely no evidence to prove the existence of either an external or internal cause which could be identified. My own belief and experience is, that we may get the average of an equal number of persons with and without skin disease or eruption, and the percentage of good, general health will be as large in one class as in the other.

Duhring, under "etiology," says: "A large proportion of the cutaneous diseases are intimately associated with derangements of the internal economy, and, therefore, strictly speaking, "symptomatic diseases." I don't think the rest of his work shows that he meant by this that a certain skin disease is always the symptom of a certain internal condition, nor that either is necessarily dependent upon the other. He says, further, that the line of demarcation between local and constitutional diseases cannot be a strict one, and that "general ill health, arising from a variety of

causes, plays a conspicuous part in both the causation and the continuation of cutaneous affections."

From the younger Hebra we get an almost opposite view, in his discussion of the etiology of eczema. Eczema has very justly been called the "keystone of dermatology," (in the mind of many it is the entire arch), but to return to Hebra, he says: "Some attribute all to constitutional causes, others all to wholly local influences, but a careful analysis will show that they are due to both." "But," he says, "We cannot call eczema a local manifestation of a constitutional disease, as is the case with syphilis." He holds, following his father, no doubt, that the far greater number of these eruptions are due to external influences—thus being "artificial." Bulkley says of eczema: "It is eminently a disease of debility; this may be of three kinds; assimilative, nutritive, or nervous, or, as more commonly spoken of, gouty, strumous or neurotic. He thinks the majority show the gouty state. I remember one of his habitual prescriptions in the New York Skin and Cancer Hospital. It contained tincture of nux vomica, "Fowler's solution," acetate of potash, and water at least, and was given to the majority of his eczema patients, with occasional variations. His remarks upon general etiology are worth reproducing: "Failure in the action of the kidneys, bowels lungs and liver, deranges the balance of the system, and may result in disease of any organ which has work thrown upon it which it cannot perform. We must believe, therefore," he says, "that the skin undoubtedly may become diseased in the effort to produce its secretions from imperfectly elaborated blood, as well as to take its nourishment from that which has been insufficiently prepared for it in other portions of the economy."

Robinson says: "We do not believe that at any time such conditions as scrofula, anæmia, chlorosis, etc., produce an eczema, except in an indirect way by increasing the

irritability of the elements of the skin, or lessening their power to withstand direct irritation either from within or without, and we are obliged to hold eczema directly of local origin." What Fox says of eczema applies to other skin eruptions, viz: "Its association with various general maladies may suggest a relationship." Here are a few of the "predisposing" causes of eczema as enumerated by Veiel in Zeimssen's Hand Book of Skin Diseases, which, if we admit their influence, disprove the theory of a specific blood condition as the source of the disease, viz: Chlorosis, vachitis, scrofula, gout, albuminuria, diabetis, dyspepsia, gastric and intestinal catarrahs, dysmenorrhœa, uterine affections, lactations, pregnancy, and if he has omitted any, we must believe that it was wholly unintentional. We may find one or more of these conditions accompanying various skin diseases, and the whole matter could have been as fully expressed by saying: "Any condition of health which tends to lower the vital forces and reduce the powers of resistance of the skin, may act as a predisposing element."

Eichhorst says, in Wood's Library, etc., in speaking of causes of eczema: "There is danger of mistaking an accidental complication for an etiological factor." Elliot speaks of that "indefinitely and deplorably termed condition, 'impurity of the blood,'" in his article on the treatment of eczema. (Med. and Sur. Jour., 1890).

Piffard believes that fully one-third of all skin diseases originate from a *materies morbi* generated in the body from digestive, assimilative, or excretory functions. He enlarges upon the subject when he expresses the opinion that "eczema is produced by material formed in the blood from imperfect oxidation; the cause of the latter being the failure of the liver to perform its full duty as an oxidizing agent." Of course he does not mean all eczemas, but the above sentence should bring comfort both to those who cherish

the "blood" theory, and to those who are accustomed to often find "the liver out of order." (Piffard's views are not accepted by dermatologists in general.) He further thinks the most common peccant matters in eczema are uric and oxalic acids. Taylor says that the attempt to prove that a number of distinct morbid conditions or diatheses is at the root of eczema and of allied skin diseases, has resulted in failure. Robinson says, "dentition is no more the cause of skin disease than of other troubles innocently charged to it." We usually find that annoying and incurable disease, psoriasis, in robust subjects, but the recurring attacks may be produced by temporary lowering of health. Certain skin affections, as pruritus and eczema, are quite common in old persons, the result probably of senile changes. It is well known that vaccination sometimes sets up a skin disease, as eczema, impetigo contagiosa. Varicose veins of the leg may cause ulceration or eczema. That unpleasant condition known as dermatalgia is considered by most authorities as closely related to rheumatism. Pruritus has been attributed to the uric acid diathesis, diabetis mellitus and jaundice. Boils are often considered evidence of good health, whereas the reverse is true. They, as well as carbuncles, abscess and gangrene, have frequently been associated with diabetis mellitus but are beginning to be considered the result of infection—"pus cocci."

Purpura rheumatica (a rare disease) gets its descriptive adjective from the belief that it is closely related to rheumatism. Lupus vulgaris is considered a tuberculosis of the skin, and is the disease in which so much was claimed for the effect of Koch's lymph. "Shingles" (herpes zoster) has been found in many cases due to peripheral or central injury to the sensory nerves. Then we read that certain changes in the pigmentation of the skin are due to nervous influence, likewise local sweating, (probable) and attacks of urticaria. Hebra, Jr., has a description of a number of "trophor-

neuroses," but they are not generally accepted. He also had a case resembling purpura hemorrhagica, the result of phosphorus poisoning. From my own notes of about three hundred cases, I eliminate about sixty as not coming properly under consideration, belonging to one or the other of the class mentioned, at the beginning of this paper. Of the remainder I find about eighty-seven had some general disorder, and about a dozen with only chronic constipation. The age ranged from two months to eighty-five years. The skin diseases among the number were those most commonly met with in practice. Chronic urticaria alone (three cases) seemed always accompanied by the rheumatic diathesis. The most common deviation from health was some form of dyspepsia in adults, and stomach and bowel troubles in children, with occasional excess of uric acid in the urine of either. Children whose nutrition was low, owing to artificial feeding, were generally troublesome cases to treat. The urine of patients was not regularly examined unless it seemed necessary, because I had regularly tested and examined microscopically the urine of every patient that came into the Skin and Cancer Hospital until I got tired of the negative results, save occasional uric acid, oxalate of lime or phosphates, and I became convinced that nothing abnormal would be found in the urine of the average skin patient. I have seen a patient with eczema get a severe relapse after taking a few bottles of beer, and have had women in which there was some aggravation at periods.

But it would be a useless waste of time to read the details of my cases. It is sufficient to say that there were at least one-third of the true eruptive cases in which it was impossible to ascertain any deviation from health, and it is also true that in the majority of those cases where there was a deviation from health, there was no positive evidence of a direct connection between the skin trouble and the internal

disease. The diagnosis of a skin disease is as important as the diagnosis of any other disease—for the treatment of the different diseases differs markedly. The prognosis depends upon the correct treatment, the faithful following of directions by the patient and our ability to restore the vital functions to a condition rendering it possible for the skin to receive the proper nourishment or its proper nervous influence. The "soundest general practitioner" if he can employ the proper local treatment also, is the most likely to get good results in the treatment of skin diseases, but do not give internal medicine unless especially indicated. You must select your case in giving arsenic. You will find some other diseases besides syphilis which may be favorably influenced by iodide of potassium, perhaps from its diuretic action. There is a common belief that it is dangerous to cure certain skin diseases, lest you "drive it back in the blood," as a patient told me. This is related to the idea that *fistula in ano* should not be cured lest the patient develop consumption; a belief which no longer exists universally.

Duhring says it should always be the aim of the physician to cure a skin disease as rapidly and effectively as possible; that we need entertain no fears of "curing too soon," nor of driving in the eruption, but the danger is rather in temporizing with the disease. Crocker says: "The popular idea that it is dangerous to cure eruptions quickly, or as the laity put it, 'drive the rash in,' is as erroneous as the notion that nearly all skin diseases are due to 'impurities of the blood.' Taylor mentions the absurdity of the idea of 'danger in curing up.'" The above writer says that internal medicine is not needed in a large proportion of cases of eczema, as they will often yield to local measures alone. This has been my experience with the majority of skin diseases. Simon says, "Hebra was no doubt right when he said there was no specific constitutional treatment for skin

diseases." Crocker says, "Probably of all conditions requiring attention, dyspepsia and other disorders of the alimentary canal are the most important." Elliot says: "There are no specifics for eczema, no drugs which influence the process directly and by virtue of their peculiar properties and actions, but the benefit which is obtained from the use of any medicinal agent internally, is through its power or capability of removing or improving those functional or other disturbances of health which brought about a predisposition and favorable condition for the development of the disease." The whole matter of treatment can be expressed in a few words: Treat the general conditions just as if there were no skin disease present, and the skin with appropriate local applications. To sum up now, I have written mostly of eczema because it is the best known and most common skin disease—comprising about one-third of all. You find nearly every type of skin disease is one or the other form of eczema; and so what applies in general to eczema applies to all the others. Two things are evident after reading the opinions of the various writers upon skin diseases. First, we can be positive that all skin diseases are not "blood diseases," or the idea would have been universally accepted.

In the second place, their disagreement in some details and their general unanimity in other details show that there is as yet much to be learned concerning the actual etiology of skin diseases. The germ theory has received scant attention in this paper because the discoveries of skin-disease-producing-germs are as yet in a most decided condition of infancy, and a discussion thereupon would lead us further into the dark than the necessities of the case demand.

Authorities consulted: Neligan Dis. of Skin, 5 Am. Ed. 1866; Eichhorst, Wood's Library, 1886; Duhring, Dis. of Skin, 1888; Robinson, Manual of Dermatology, 1885;

Hans Hebra, Dis. Krankhaft, Ver. der Haut, etc., 1884; Bulkley, Manual of Skin Dis., 1887, and article in New York Medical Journal, May, 1890; Stelwagon, Essentials of Dis. of Skin, Saunder's Compn., 1890; Simon, Wood's Med. and Surg. Monographs, 1889; Elliot Agen. outline of treatment of Eczem; Atlanta Med. and Surg. Jour., 1890; Zlemssen's Hand Book of Skin Dis., 1885; Taylor's Chemical Atlas of Skin Dis., 1888; Fox, Photographic Atlas of Skin Dis., 1884; Piffard's Practical Treatise on Dis. of Skin, Illustrated, 1891.

DISCUSSION ON DR. HUTCHINS' PAPER.

Dr. A. W. Calhoun: I am sorry that the acoustics of this hall are such that very few of the gentlemen present heard the excellent paper which has been read by Dr. Hutchins. I hope some of the gentlemen will discuss the paper freely. I know comparatively little about skin diseases myself, but I have no doubt that there are gentlemen here who have had a good deal of experience in this department of our profession. We all know that ringworm is a common thing, but it is a very stubborn affection to treat, and there are a multitude of other skin affections that the gentlemen have had in their hands that the paper treats of, hence it seems to me that a very interesting discussion could be had on this subject. I would like to hear the experience of the different members present.

Dr. V. D. Lockhart: Mr. President, I find that there is a disposition on the part of doctors to use irritating medicines in the treatment of eczema. They use iodine and things of that kind. I believe if we have a dry eczema, and it is not of a specific nature, that it should be treated with mild, soothing applications, something of an oily nature perhaps, combined with a detergent remedy, washes externally applied. I find that a large number of cases of eczema depend upon a debilitated condition of the system generally.

Some of them are people who are partially starved, and others who have not a sufficient amount of nourishment. There are various specific causes that arise from time to time in our practice, and they should be looked into, of course, and treated, but if you have a dry eczema, it is foolish to paint it over with iodine and thus irritate the skin too much, rather than soften it by mild, soothing applications, and afterwards apply something more stimulating to bring about healthy granulation and cure the disease.

THE TREATMENT OF ABORTION, AND SOME OF THE COMPLICATIONS INCIDENT THERETO.

BY WALTER A. CROW, B. S., M. D., ATLANTA, GA.

Mr. President and Gentlemen:

I have selected this as my subject to-day for several reasons. In the first place, it is a subject of special interest to every general practitioner, from the frequency with which he is called upon to treat these perverted conditions of nature's honest efforts; and, secondly, it is a condition, the results of which give rise to the necessity of special treatment in the hands of the gynæcologist and abdominal surgeon, more than any other single cause in the diseases of the female human subject.

It is not my intention in this paper to consider the many causes of abortion, but shall confine myself to the treatment of the premature emptying of the pregnant uterus prior to the sixth or seventh month of gestation. This also includes a portion of the time when this accident is known as a miscarriage.

Now, if we will briefly consider certain physiological conditions that we find in these cases, it may serve to enlighten our minds somewhat as to the causative relation in the consideration of the sequelæ.

The period immediately following the fecundation of the ovum, and its attachment to the decidua, is marked by a decided stimulation in the growth of all the parts, extending to and including the tubes and ovaries in some degree.

This is the "miraculum naturæ," as it was called by Swammurdam in 1672. "This increase in the size of the

uterus is largely due to changes in the muscularæ. The muscular fibres are increased from *five* to *seven* times in length and from *two* to *five* times their original breadth (Kölliker), also new non-striated fibres are developed from embryonic muscle-cells stored up especially in the inner layer of the uterine wall." (*a*.) Together with this change in the walls of the uterus, there is also as decided a change in the lining membrane of the interior of this organ. It matters not materially in this case whether we adhere to the old views of the thickening and change of the mucous membrane, or to the more recent and plausible views of Johnstone and others, who claim that the endometrium belongs to the so-called "adenoid tissue," traversed with lymphatic spaces, and "during gestation this uterine lymphatic system undergoes hypertrophic and hyperplastic change in all form elements, analagous in kind and degree to those of the blood vessels." (*b*.)

Now, from this condition of affairs we find in cases of an accident (abortion) which directly opposes the normal efforts of nature, a large area of exposed surface, the endometrium, which is altogether favorable to septic infection, from the purulent material in which it is constantly bathed, due to the breaking down and liquefying of the decidua or as is often the case, from portions of retained membrane or bits of placental tissue.

The uterus has taken on size and weight for the completion of the wonderful task for which it was intended. It has opened the highways of lymphatic canals and blood-vessels for the bringing in and storing of material, but suddenly, without warning so far as preparation, as we see in full term pregnancy, the plans are entirely changed; from a condition of building up, we have a task of repair, an overstock of material without a place to utilize it, and

(*a*) American System of Obst. Hirst.
(*b*) American System of Obst. Hirst.

in this, as in practical business life, a sacrifice has to be made and somebody is the loser. In our case, we generally see it in the giving away of the general health of our patient, or the development of some specific trouble which bears a causative relation thereto.

My observation in these cases has led me to believe that in the treatment of all cases of abortion and especially of the earlier months, we have to combat a tendency to septic infection. The mildest but most common form, I consider, is the arrest of the retrograde involution of the uterus—a condition generally known as *subinvolution* from these other and more pronounced types—such as pyosalpinx, abscess of the ovaries, pelvic or general peritonitis, etc., is met with. The marked tendency to recurrent attacks of an inflammatory character is particularly noticeable in all of these cases. The most common form is metritis and chronic endometritis, but it may extend so as to involve the appendages, also the adjacent tissue and viscera. Malposition of the uterus, especially the backward displacement, retroversion and flexion, are frequent results; this is no doubt due to the increase of weight and relaxed condition of the ligaments.

It is my plan when called to these cases of threatened abortion, to first ascertain if it is possible to relieve the condition so as to allow normal gestation to continue without injury to my patient. If this cannot be done, my next object is to try and prepare the patient the best I can for the trying ordeal that she is about to pass through. The first indication, therefore, is to remove as far as possible all sources of infection. When I can, I have my patient take a warm sitzbath with a liberal use of soap; if this cannot be done, I then do the next best thing, have the parts well wiped off with warm water and soap. I then douch the vagina with a 1 to 2 or 5,000 bichloride sol., open the

bowels well either with C. C. pills, salines or an enema of warm soap suds.

The condition of the parts and stage of labor, of course determines my next movements. If the os is not patulous enough to admit my index finger, and there is no immediate danger of my patient's life from threatened hemorrhage, then I prefer to rapid dilitation plugging the os with strips of iodoform gauze, also packing the upper portion of the vagina with the same material, then wait from twelve to twenty-four hours, keeping the patient perfectly quiet in bed. If the pains are severe, I usually give an opiate with blackhaw, and sometimes combine ergot fluid extract in from two to five drop doses, to be repeated every two to four hours *pro re nata*. If there is a frebrile tendency and I want time for more positive results of nature's efforts, then a combination of quinine, Dover's powder and ergotine, has given satisfaction in many cases. The ergot, you will notice, is given in small doses, as it is not intended so much to excite severe uterine contractions, as to act as a mild stimulant and thereby aid the uterus in expelling the contents. At the end of twelve to twenty-four hours, from plugging the cervix, I usually find the fœtus, placenta and membranes either in the vagina or impacted in the cervix, which then becomes an easy matter to detach; but in case I do not find this condition that I have supposed, I then give chloroform, thoroughly dilate and empty the womb of its contents, using a dull curette freely so as to remove as near all of the decidual membrane as possible. I then wash out with a 1 to 5000 bichloride solution and pack the uterus with iodoform gauze. This I remove in four or five days if it is not already expelled. I then wash out the vagina again with a 1 to 5000 bichloride solution; keep my patient in bed, using the same routine treatment that is common in full delivery. But it is just at this stage of the case that I wish to pay more than the ordinary attention,

for here is the turning point, and we often deceive ourselves as to the exact state of affairs. Instead of the uterus being entirely cleared as we suppose it to be, a bit of membrane or a portion of the placental tissue is retained, and for that reason I deem it justifiable and safe in all cases to thoroughly examine the interior of the uterus with a small wire curette; in this way with a little practice you can get a very accurate idea of the interior of the womb, and will thereby be enabled to remove any offending substance, which would otherwise likely give rise to the train of evil results that I shall try to bring out in this paper, and will illustrate by a recital of the following cases:

Case 1. Mrs. W., aged twenty-four, multipara, was four months pregnant, and miscarried last August. She was a strong, robust woman, and seemed to entirely throw off the fœtal contents at the end of the second day, and was assured by her attendant that she was all right, and would be up at the end of two weeks. This period was passed without anything unusual except a rather free flow. She did not get strong as she had hoped to, but found at the end of five or six weeks, that this flow of a whitish character continued, though not so freely. At her second month her menses returned, which was very free, and lasted longer than usual. She gradually grew anæmic and had a tendency to night sweats; for this she was given a tonic and was told that she had taken cold, but would be all right soon. She missed menstruating in October and November following, and supposed she was again pregnant, and this would account for the pain and weak feeling in her back and pelvic region. In December, (about the 10th,) she commenced to flood, and sent for me to see her. I found her having pains, returning regularly, and losing blood of a bright color, quite freely. The os was patulous, which enabled me, after using a vaginal douch, to make a thorough examination of the size and interior of the uterus. I

found a boggy mass, which, when removed with a currette, looked like a mass of old placental tissue, about the size of an olive. The uterus was fully twice its normal size, subinvoluted and prolapsed to about the second degree. I thoroughly curetted the cavity with a sharp curette, washed out and packed the interior with strips of iodoform gauze. I also found a thickening of the tube on the left side with the ovary prolapsed and slightly enlarged. The patient was kept in bed and bowels opened freely with salines. The gauze came away of itself on the morning of the fourth day. A local treatment for the next month with iodine applications, glycerinized cotton tampons and keeping her bowels open with a saline and a chalybeate mixture with nux vomica, improved her general condition very much.

Case 2. Mrs. H., age thirty, multipara, miscarried last September between three and four months pregnant. The uterus was supposed to have been thoroughly emptied, still she had a slow getting up, and continued to have a purulent vaginal discharge. She gradually grew weak, had slight fevers, poor appetite, headaches and very much depressed in spirits. She was brought from an adjoining county to see me about the middle of November. I found the uterus subinvoluted and retroflexed, also a mass on the right side about the size of an English walnut. I advised a laparotomy, but this being objected to, the next best thing for me to do was favor drainage. I dilated and curetted, removing about a teaspoonful of granular tissue. I noticed quite a free discharge of purulent material when I dilated the cervical canal. I washed out the uterine cavity with a 1-5000 bichloride solution, being careful to have a free return flow, then inserted strips of iodoform gauze to favor drainage; this was removed and replaced on the third day, also washing out the cavity. The tumor was so much smaller on the ninth day that I left the gauze out. For the next three weeks a local treatment of hot salt

water vaginal douches, iodine applications and boro-glyceride tampons was kept up. I gave a mixture of iron, chlorate of potash and nux., also kept the bowels open with salines. Her condition was so improved by the end of this time that she was able to return home. I have since learned that she is again pregnant, a condition that I regret very much in these cases.

Case 3. Mrs. H., age thirty-two, mother of five children, had always had very good health up to the time of her third pregnancy, when she had an abortion at the third month; this was six years ago. She had a slow getting up, and has since suffered more or less from uterine troubles. She came under my care eighteen months ago, on account of a severe menorrhagia. On examination, I found a condition of chronic endometritis. The uterus was enlarged, prolapsed and retroflexed, also thickening of the appendages on the left side which were very sensitive to the touch. This patient had lost blood until she was very anæmic, so much so that an attack of la grippe made her condition a very serious one. The local treatment was curetting, washing out and packing the interior of the uterus with strips of iodoform gauze, as used by Dr. Polk, of New York, also tampons of boro-glyceride with alum. This, with a general treatment of tonics, oxygen gas and close nursing, enabled her to get out again so as to assume a portion of her household duties at the end of six months. She is now in very good health, but still has a misplaced uterus slightly enlarged.

The points I wish to impress in this paper are as follows:

1. The marked tendency to infection in all cases of abortion.

2. The urgent necessity of removing as far as possible all sources of infection; this includes clean hands, clean instruments, cleanliness of person and bedding.

3. The importance of thoroughly satisfying yourself in

all cases of the complete removal of all the fœtal membranes and placental tissue.

4. Keep your patient under observation for at least two months, with the most favorable surroundings for complete and perfect involution of the enlarged uterus; building up the general health and keeping the bowels open, if necessary, with salines.

5. Be urgent in your advice in avoiding the possibility of becoming pregnant for at least six months, as sexual connections produce more or less irritation and congestion of the parts and thereby retard, if not in a measure stop, the condition we most desire in these cases—a normal restoration of the parts.

DISCUSSION ON DR. CROW'S PAPER.

Dr. James B. Baird: I desire to make a few remarks in connection with the important and interesting paper read by Dr. Crow. In the principals enunciated by him I cordially concur. It seems to me, however, that if the technique which he recommends can be simplified, it will be greatly to the advantage of the practitioner, and will add very much to the comfort of the patient. Of late years I have not suffered either in mind or in my results in the management of cases of abortion. It has fallen to my lot to treat a good many cases, and I have never seen a case of septic infection following abortion, occurring either in the early or in the latter stages of gestation.

The doctor dwelt briefly upon the preventive treatment, and spoke of purgatives. I regard purgatives as objectionable, if we are seeking to establish a quiescent state of the uterus. I should prefer, if practicable, to omit purgatives, especially the more severe ones, such as aloes, the officinal compound cathartic pill, etc. We can resort to milder means, if a laxative is thought to be necessary. I should seek to avoid the use of any purgatives or any

perturbing influence at this time. I attach considerable importance to rest in the recumbent posture. I regard opium as a most important medicinal means. I value also viburnum prunifolium. I believe, beyond a doubt, that if we obtain a good specimen of this drug it is very serviceable in these conditions. Ergot, I administer, if at all, when the womb is empty. I look upon it as a cardinal principle in labor to withhold the administration of ergot until the contents of the womb, including the after-birth are out of it. The exhibition of ergot at any stage of abortion, is, to say the least, of doubtful propriety. If the ovum or the fœtus is not delivered without the aid of ergot, by all means let us adopt other artificial means, and certainly not resort to so dangerous and uncertain a remedy as ergot. The best we can hope from this drug under these circumstances, is that it will accomplish nothing.

In reference to mercuric bichloride injections into the uterus in these conditions, they are certainly not entirely free from risk. They may be used freely and successfully, that is, without unpleasant or toxic effects, in a great majority of cases, but we should be certain to see to the prompt and complete return, and even then there seems to be doubt as to how absorbent the surfaces may be and as to the quantity of the medicament that may be taken up. My method of treating abortion, after it becomes assured, is not to undertake to pack the cervix, but to introduce and place against the os simply a pledget of clean cotton, freely supplied with iodoform. It is best introduced by means of forceps, using Sim's speculum, in the lateral position, up to the cervix, and the whole vagina is firmly, carefully, and uniformly packed down to the perineum. I treat cases in that way and leave them twenty-four hours with absolute confidence, both in and out of the city, five, ten, and twenty miles distant, without the least apprehension. I see them again at the end of twenty-four hours, remove

the dressing, and if the ovum has not been expelled, another is applied in a similar manner. If the abortion is not accomplished, I wait with this precautionary provision. It is usually accomplished within two or three days. I see no reason under these circumstances, why we should not wait. If it should be necessary to reapply a tampon several times, I take the precaution when changing it, to use an injection of a solution of carbolic acid in hot water to cleanse the vagina and relieve it of the sensitiveness that repeated packing induces. If treatment by simple means is effective, it saves interference with the womb and it is certainly better not to be officious or meddlesome without good and sufficient cause. I believe that energetic manipulation should be withheld, unless some actual existing necessity makes active interference imperative, for the correction of present untoward symptoms or to escape troublesome or dangerous sequels.

Dr. J. W. Duncan: While the paper of Dr. Crow has been interesting and instructive to me, I think he has omitted two things. It is almost impossible for a man to cover the whole ground in a single paper. One of the remedies I have found very good in preventing abortion is the application of a few pledgets of cotton thoroughly saturated with glycerine around the os. In some of the cases that I see of threatened abortion, where the woman suffers a great deal of nausea in the early months of pregnancy, I think it is due to flexion, which can be remedied by a little manipulation and touching the external os with a 50 per cent. solution of carbolic acid, and then pledgets of cotton saturated with glycerine will act nicely. It is necessary in some cases to give viburnum prunifolium. I have great confidence in it. I like it very much. Sometimes I use an injection of morphine where the symptoms are urgent. After I find abortion is obliged to take place, I pursue the course suggested by Dr. Baird. I feel safe when I leave

my patient after tamponning. Without that I do not feel safe. If the fœtus is thrown off, and the placenta remains, I do not feel safe until I remove the placenta. I dilate with my finger in the uterus and feel everything that may be in there, and I have not been in the habit of using the curette. I have used the curette a little, but I like to use my finger better. By introducing my hand into the vagina, I can pass my finger generally to the fundus of any ordinary uterus after the fœtus has been delivered. I do not wash out the uterus with bichloride of mercury as a rule, but I have used it a few times. I use a weak solution of carbolic acid, following the use of bichloride, as a preventive; even while flushing out the uterus I follow it up by using a solution of carbolic acid.

Dr. V. D. Lockhart: This is one of the most interesting subjects that I have heard talked about for a long time, and the paper was very instructive to me. The practitioner lives in the country where abortions and premature deliveries occur, and they become a great source of annoyance to him. They are very troublesome indeed, and it requires a great deal of patience and careful treatment, in my opinion, in such cases. My experience has been that there is not a very great tendency to the development of septic symptoms. Why it is I do not know.

The preventive treatment spoken of by Dr. Baird is all right. Have used viburnum prunifolium a great deal and believe in its efficacy.

I have been imbued with the idea that we ought not to give ergot under any circumstances, until we have emptied the uterus of all its contents. My reason for it is this, that it rather retards than helps along the process that we wish to accomplish. It brings on forcible contractions of the uterus. It breaks down the membranes, and instead of having a symmetrical foreign body favoring normal contractions, pressing equally on all sides to carry itself on to

a favorable termination, we have a downward projection of the ovum and membranes with partial detachment, and then hemorrhage is likely to occur, and sometimes these hemorrhages are fearful. I think it is a safe plan to take a little strip of roller bandage, tampon the uterus or vagina perfectly tight, pack it down with Sims' speculum, and the stimulating influence of that tampon, resting as it does against the uterus, actually gives the uterus all the necessary force that it requires, and the process is hastened in twenty-four or thirty-six hours. As one of our eminent men said on one occasion, "they will die sometimes from bleeding, but if they will die, let them die with a good firm tampon in the vagina."

Dr. R. R. Kime: There is no subject more important to the general practitioner than the one under consideration at the present time, and until we recognize the difference between septic infection and putrid infection and the treatment before and after the ovum has passed off, we shall be in the dark. There is a difference between septic and putrid infection. The essential thing to do in these cases is to be certain, in the first place, that you do not carry septic material to your patient, or that your patient does not become infected by something that should be thrown off. Dr. Baird would not tampon the vagina after the ovum has passed off and retain the placental structures in the uterine cavity. His plan is the standard recognized treatment of abortion before the ovum is thrown off. The practitioner who tampons the vagina after the fœtus has passed off and leaves portions of the placental structure in the uterine cavity, lays his patient open to septic infection, and by forcing into the Fallopian tubes blood, and septic or putrid material, peritonitis developes, followed by death of his patient. The cavity of the uterus should be thoroughly cleansed and disinfected after the fœtal structures have passed off, and, if necessary, curetted and scraped out, thus

preventing death of the patient nine times out of ten. If you watch your patient closely in putrid infection, you will notice a slight elevation of pulse for two days even, before there is an elevation of temperature, which gradually rises from two to three, up to five degrees, unless the uterine cavity has been emptied of its contents, and thoroughly cleansed out. Septic infection runs its course very rapidly. When you find a gradually increased pulse rate, and an elevation of temperature, you may suspect that the patient is gradually becoming infected. Then is the time to dilate and to wash out the cavity of the uterus with a mercuric chloride solution, being always certain to follow that with hot water, and then the danger to life is materially lessened. After the cavity of the uterus is thoroughly washed out, you can throw in a disinfectant tincture of iodine, or campho-phenique, which will prevent decomposition from taking place.

Dr. W. A. Crow, in closing the discussion, said: I am afraid Dr. Baird misunderstood me with regard to the use of purgatives in cases of abortion. What I meant to imply was this: That where we have a case of abortion, opiates are usually given to relieve the colicy pain that patients complain of, and we find the bowels impacted with fæcal matter. I thoroughly empty the lower bowel and try to restore the intestinal fluids. I think the doctor now understands my idea as my paper does not consider the preventative treatment of abortion.

With regard to the administration of ergot, I am opposed to giving it in large doses in these cases for the purpose of bringing on decided uterine contractions. It has been demonstrated that ergot contracts the circular fibres of the os, and its action is confined largely to the lower part of the uterus. My idea in prescribing ergot in small doses is to prevent a possible relaxed condition that might lead to hemorrhage. The curette. There are a certain

class of cases in which I always use the small wire curette, on account of the safety with which I can use it, and the satisfaction its use gives me in making my diagnosis. Now if the os is patulous enough for you to make a satisfactory examination with the finger, then I give a decided preference to the touch of the clean finger to any instrument for making a diagnosis. But let us suppose the os is rigid and the uterus is contracted down so you cannot introduce the finger without dilatation, then I say it is far better and safer to use the curette than to run the risk of lacerating the tissues by dilatation and thereby add greatly to the possibility of infection.

TREATMENT OF PNEUMONIA WITH REPORT OF CASES.

BY H. PERDUE, M. D., BARNESVILLE, GA.

Pneumonia holds a high position among the fatal diseases of the human race. Its victims yearly darken the plane of life from the palatial residence to poverty's hut. It claims a mighty host in the army of the dead.

While its mortality rate ranges from 3 to 35 per cent., its average under all circumstances, according to statistics, is 20 per cent, or one out of every five (Loomis). This stamps it as a fearful disease, and should claim our most serious attention and study. Human life is a precious gift from the hands of the Almighty, and it is an imperative duty to prolong it, if possible, to the extreme limit of old age.

Passing by the etiology, pathology, and diagnosis of this disease in its various forms, which being in recent works and accessible to all physicians, I shall devote my time in as concise a form as possible to the most successful methods of treatment, especially in my hands.

I shall consider principally acute croupous or lobar pneumonia. Taking as a definition of this disease, that given by Dr. A. L. Loomis in his work on "Practical Medicine," viz: that it is an acute general disease, characterized by an inflammation of the vesicular structures of the lungs with an exudation into the alveoli, which renders them impermeable to air. I shall proceed to give some of the points of treatment.

In the congestive stage, which lasts from one to three days, the patient is generally very restless, with high

pyrexia, a sharp, stabbing pain beneath the nipple of the affected side, except in central pneumonia. Pleurisy, which gives so much pain, is said to be present in about 85 per cent. of all cases. In the beginning, nausea and vomiting occur in about three-fourths of the cases.

The first step to be taken then is to relieve these distressing symptoms. Some give morphine hypodermically before the exudative process is completed. This will generally give quick relief, the thing so much desired by the patient, but I generally prefer phenacetine, as some people do not bear opiates well. It reduces the fever, produces sweating, and gives ease. It is in my opinion THE remedy par excellence, at this period. I give it in nearly all cases, except the very old, the very young, and the very feeble, always giving alcoholics with it. I have many a time, with it, had my patients resting quietly and asleep in twenty to thirty minutes. Five grains is the average dose for adults, about four hours apart. In a very few cases, six grains will be required, and occasionally four grains will prove to be enough. The second dose may have to be given in two or three hours. The guide for diminishing or increasing the dose is the reduction of temperature produced. Sleeping and sweating are the conditions desired. I once gave 7½ to 8 grains of this medicine at a dose, but am now satisfied that five grains with whiskey should be the average dose. Sometimes it is more effective, as well as satisfactory, to give a smaller dose, and at shorter intervals. Some use cold applications to reduce the fever and give ease. Believing that the inconvenience, exposure, and depressing effects are too great, I have never tried it. American practitioners are generally against it.

Some give large doses of quinine to reduce the fever. I have tried it to some extent, but like my present method better.

As soon as located, some counter irritant or soothing ap-

plication should envelope the affected side, and, if the inflammation is in both lungs, the whole chest should be encased. That application may be a hot poultice, spongiopiline or cotton batting covered with oil silk, a flannel cloth saturated with spirits of turpentine, or a mustard plaster. These should be renewed from time to time.

After some rest has been obtained, if the patient has not already been purged, it is well to give a dose of calomel.

Sometimes we find a patient in great peril from venous engorgement and exhaustion of the right heart in its efforts to propel the venous blood through the capillaries of the lungs.

Formerly, to relieve this distressing symptom, venesection was practiced by some, removing a portion of the venous blood. But that has been abandoned on account of its depressing effect.

The effect of the nitrites in dilating the arterioles, meets the urgent demand. Nitro-glycerine, especially, fulfills the indication. It is a valuable fact that it is as quickly absorbed through the stomach as when given hypodermically. It does its work quickly. On wings of mercy it flies to the rescue of the beleaguered one, unlocks the pent-up channels, and permits the waste products of the venous blood to become purified in the lungs, and the pure life-giving liquid to go on in its mission of love.

It should be given in doses of $\frac{1}{100}$ gr., and be repeated in 20 or 30 minutes, if necessary, and afterwards every two or three hours as long as needed.

I always give strychnia in $\frac{1}{60}$ gr. dose, and atropia in $\frac{1}{100}$ gr. dose in this condition at the same time. They are heart and respiratory stimulants and should be continued about four hours apart until this condition is well relieved. The strychnia should be continued, generally, through the whole disease. It strengthens and sustains the tired and fagging heart until recuperating nature comes to the rescue.

I have used in nearly all my cases of lobar pneumonia, this season, the peroxide of hydrogen, and with good effect, I am sure. It was given for its germicidal properties, the oxygen it furnished the patients exhilarating and strengthening them. The most remarkable therapeutic effects of this remedy in this disease that I have seen is from Dr. J. L. Green, of Colorado. It is to be found in the *Medical Record*, of New York, Feb. 6th, 1892. All of his uncomplicated cases, which were more than 150, got well. I have been giving one teaspoonful of Marchand's preparation in an ounce or two of water every half hour or hour. When the patient is evidently better, to prevent worrying him too much, it was given farther apart. If it nauseates, and sometimes it does, the quantity should be diminished. I feel confident it has saved valuable lives. Any other good preparation of the peroxide, no doubt, would do the same.

Throughout the stages of congestion and consolidation, phenacetine in 5 grs. doses should be given in connection with whiskey, or milk punch every four hours, unless the temperature should get below 103° F. Midway between, I generally give carb. or mur. ammo. with prun. virg. and syr. senega. In all bad cases, it is good policy to continue the peroxide about two hours apart. It hastens the crisis.

If the patient is disposed to be very restless, and the phenacetine does not keep him quiet, I sometimes give the spts. eth. co. in teaspoonful doses. If it becomes very necessary that he should have something else to produce sleep, chloral in 8 to 12 gr. doses is an excellent remedy. If he has not had whiskey sufficiently, it should precede the chloral to prevent its depressing effects.

The patient should be kept in bed, and not disturbed by conversation in the room. He should have rest to conserve

the powers of nature. Good nursing is a very important part in the management of pneumonia patients.

A nutritious liquid diet, such as sweet milk, beef tea and palatable broths should be given. Sometimes the nausea is so great that patients will not readily take the diet named above. I have found Reed & Carnrick's Kumysgen, claimed to be a product of pure sweet milk, to be well borne and to sustain the patient.

The room of the patient should have fresh air throughout the whole treatment, and should be kept at a temperature of 65° to 70° F.

In convalescence, stimulating expectorants and tonics are indicated.

In catarrhal pneumonia, the supporting treatment should be given from the beginning. Liquid diet, principally, should be given frequently, as the patient will not generally take much at a time. Patients should take stimulants from the beginning, and continue them throughout the treatment. I generally give carb. or mur. of ammo. during the entire treatment. Quinine is a very valuable remedy in reducing the temperature and as an aid to resolution.

Mild mustard poultices or plasters to the chest are very valuable; also flannel cloths or jackets saturated with turpentine, diluted with oil if the patient is a child.

Great care should be exercised in convalescence to prevent a relapse or a second attack.

REPORT OF CASES.

Before I begin this report, I wish to state that my partner, Dr. M. A. Clark, and I visited all of these cases, sometimes together and sometimes separately, and were in perfect accord in their management.

Since the 1st of January, we have had, besides several of the lobular variety, 17 cases of the lobar. Three of the lobar class had one lobe of the lungs affected, four had

two, nine had three, and one had four. This shows an unusual *pro rata* number of the lobes attacked, yet we have not lost a *single* case.

To prevent the lengthening out of this paper, I will report only two cases.

1. January 24th, J. G. B., male, white, age 75, had bronchitis for 20 years, had la grippe recently and was just beginning to sit up from it. Had a chill night before. Was called at 3 p. m. Could not take his temp. on account of extreme nervousness. Inspection showed diminished breathing on right side, and increased on left. Palpation, increased vocal fremitus on right side. Percussion, beginning dullness over lowest lobe of right lung. Auscultation, numerous crepitant rales over middle right lobe. Pulse 120, respiration 38. Put him on phenacetine, grs. 5, every 4 hours, with whiskey and milk; also ammo. carb., grs. 5, syr. synegæ, m. 10, syr. prun. virg., ℥ ss, aquæ qs. ad. ℥ j., to be taken in water between doses of the other medicine. 8 p. m., dullness over middle and lowest lobes of right lung, bronchophony, crepitant rales over left lower lobe showing very rapid spread of trouble. Patient unconscious and very restless. Had the lungs completely enveloped in turpentine cloths. On account of extreme restlessness, added morph. sulp. $\frac{1}{16}$ gr. to each dose of cough mixture.

January 25th, 8. a. m., right middle and lowest lobes solidified, and upper lobe of same side evidently involved. Left lower lobe solidified; pulse 140, resp. 48. Had a bad night, but somewhat more quiet this morning. Continued former treatment except stopped phenacetine. Prescribed Marchand's peroxide of hydrogen, one teaspoonful in water every half-hour or hour, between doses of other medicines; 3 p. m., slightly more quiet; 8 p. m., resting more quietly; not so hot; unconscious. Stopped morphine.

January 26th, 8 a. m., spent a bad night; occasional

muttering, very restless, pulse and respiration very rapid. Increased the milk punch. Put him on atropia sulp. gr. $\frac{1}{100}$ and strychnia $\frac{1}{60}$ every 4 hours. 7 p. m., very restless, low muttering delirium, carphologia, subsultus tendinum, sordes, pulse very rapid and respiration labored, lips livid. Gave calomel, grs. 30, for its sedative effect. Returned in 2 hours, found him sleeping quietly, but heart labored and respiration difficult. On awakening he was given nitro-glycerine gr. $\frac{1}{100}$ and repeated in half hour, and after that 4 hours apart. Continued other medicines.

January 27th, 8 a. m., more quiet. Left off nitro-glycerine. Continued other treatment. Besides milk punch, gave beef peptonoids. 8 p. m., more restless, respiration labored, venous engorgement. Put him on nitro-glycerine again. Reduced atropia to $\frac{1}{150}$ gr.

January 28th, 8 a. m., rested better during the night. Continued same treatment. 7 p. m., rested much better during the day. Stopped nitro-glycerine.

January 29th, 8 a. m., death seemed imminent from exhaustion. Pushed nourishment and whiskey to the exclusion of medicines. 7 p. m., more quiet every way.

January 30, 8 a. m., rested tolerably well during the night. Dropped the atropia, but continued the strychnia, the ammonia mixture and peroxide of hydrogen as regularly as could without disturbing him too much. 7 p. m., better.

January 31, 8 a. m., very much better. Continued to visit him till March 9, when he was dismissed as safe, after visiting him 17 days.

2. Harry A., male, white, age 17, family history good, previous health good. Had la grippe with acute gastritis just preceding this attack.

February 6, 4 p. m. Found lowest and middle lobes of right lung involved. Temp. 105° F. Gave phenacetine, grs. 5, every 4 hrs. to reduce fever. Patient being very

nervous and restless, gave chloral hydrate, grains 7½, to be repeated every 2 to 4 hrs. as needed to make rest. Gave Mallinkrodt's peroxide of hydrogen, ℥ ss, in water every 1 or 2 hrs. Had whole chest completely enveloped in turpentine cloths.

February 7, 9 a. m., temp. 104.5° F., resp. 28, pulse 120. Still restless. Continued phenacetine. Gave ammo. carb., grs. 5, syr. senegæ, m. 10, syr. prun. virg. and aquæ, aa ℥ ss, every 4 hrs. Milk punch every 4 hrs., following each dose of phenacetine. Continued peroxide. 2 p. m., temp. 105° F., though we had continued phenacetine, which produced profuse sweating; changed to 3 grs. every 3 hrs. Continued ammo. mixture. Left off chloral as he was resting better.

February 8, 8 a. m., temp. 103.5° F., resp. 28, pulse 120. Two lowest lobes of right lung completely consolidated. Crepitant rales in upper left lobe. Continued same treatment. Sweating not quite so profuse as before, but still too great. Gave atropia sulp., gr. $\frac{1}{200}$ every 4 hrs. to check excessive sweating. 3 p. m., temp. 104.5° F. Upper left lobe in second stage. Pulse weak and rapid, and respiration labored. Sweating not so great. Stopped atropia separately, and gave in combination, atropia sulp., gr. $\frac{1}{200}$, and strychnia, gr. $\frac{1}{60}$ every 4 hours. Left off peroxide during night, with instructions to begin again in the morning.

February 9, temp. 103.5° F. Continued treatment. 3 p. m., temp. 103.5° F. Resting quietly. Respiration and pulse showing some improvement. Left off peroxide after bedtime, so as not to disturb sleep.

February 10, 8 a. m., temp. 102° F. Left off strychnia and atropia, but continued ammonia, whiskey, and peroxide. Left off phenacetine as temp. was below 103° F. 3 p. m., temp. 102.5° F. Resolution beginning in lowest right lobe.

February 11, 8 a. m., temp. 101.5° F. Better every way. 3 p. m., temp. 102°. Continued ammonia, milk punch, and peroxide.

February 12, 8 a. m., temp. 99°. General resolution over whole of affected area. Continued treatment.

February 13, temp. normal. Continued to visit him till February 15, when he was dismissed as safe, after visiting him 10 days.

DISCUSSION ON DR. PERDUE'S PAPER.

Dr. A. W. Griggs: The doctor left out in the treatment what I consider one of the most important things that pertains to the treatment of acute lobar pneumonia. If I were put on trial to cure cases of pneumonia, and they would not let me do but one thing, I would apply a rousing good blister.

I was very much pleased with the paper of Dr. Perdue; there is much in it to be commended. Our treatment must be governed by the stage of the pneumonia, the constitutional vigor of the patient and the surroundings. In the first stage, after the chill takes place—and you know that every case is initiated by a chill—there is a congestion that takes place also in the organs, and that congestion gives you certain symptoms; it gives you crepitant rales, and you do not hear them on account of consolidation of the pulmonary tissue. The lung is completely solidified. If you put on a blister large enough, it not only produces a permanent effect upon the surface and counter-irritation, but there is conveyed into the beds of the blister large amounts of lymph which then allow of the absorption of the deposits that have taken place in the pulmonary tissue, and then comes in the carbonate of ammonia which is suitable and can be used as a remedy. If the fever runs high, I do not object to giving a little phenacetine, but it is hardly worth the while when you have veratrum veride; you can control

the circulation by the use of it. You need not be afraid of it. You may use veratrum veride in these cases in small doses; I never give much more than three or four drops, and if your patient becomes nauseated again you may introduce it under the skin. You will find it acts well that way and reduces the fever more rapidly; you keep down the reaction by the use of veratrum. If the man has a weak pulse, you apportion your dose in accordance with his constitutional vigor.

The doctor spoke of the use of phenacetine and other remedies, all of which I admit are good. Suppose we get a case of double pneumonia in a vigorous man, are we going to see the fellow die for want of breath? No! We will bleed him. If he sends for Dr. Griggs he will most assuredly be bled. After he has been bled, the blister will act much better. I have said a word or two on this subject, because I have had a good deal of experience with cases of pneumonia. I have not had as many cases perhaps as Dr. Perdue in the last few years, consequently his experience may be worth more than mine; but I have seen cases dragged out of the jaws of death by a blister under these circumstances. I have followed that practice for many years. If you wish to do me honor when I am dead, say to the coming generations and inscribe on my tombstone, "Dr. Griggs used to blister in pneumonia." I am willing to stand the test of time on it until Gabriel blows his horn.

Dr. P. R. Cortelyou: I remember seeing a case with Dr. Morgan, of Bainbridge, Ga. As we drove up to the house they said the man was going to die, and they were preparing him for it by singing. He was in a very nervous condition. An old man, who acted as spokesman for the company, as there were some eight or ten men and women there, said: "Well, doctor, I thought he had the '*pneumony*.' So *I* applied a blister." It was about six inches

wide, and extended from the sternum around the back to the spinal column, and was filled with serum. It had a marked effect, and the man got well.

Dr. K. P. Moore: I rise to a question of information. Are we to infer from the applause which the Association has just accorded the mention of blistering by Dr. Griggs that the Association indorses blistering in this disease? In my earlier professional life I used blistering almost universally, but in my contact with many of our Macon doctors, who so strongly oppose it, I have been made to waver somewhat in the faith. The argument is, that a patient ordinarily has two or more inches of thoracic wall, then two pleuratic membranes not united, and possibly a pneumonia deep-seated in the lung tissue, and the question comes as to the possible good from a blister in this condition of affairs. In a discussion of this question before the Macon Medical Society, I was once asked at what stage of pneumonia I would blister, and my reply was, "Whatever stage the patient was in when I reached him." I felt then that I was in the right, but, as before remarked, I hardly know *now* where I do stand; and for this reason I ask as to what is meant by the applause given at the mention of blistering.

The question of the use of peroxide of hydrogen in the treatment of pneumonia, as mentioned by the author of the paper, is a new one to me. In the treatment of open suppurating wounds, it is one of the best pus destroyers at our disposal. As a germicide and furnisher of oxygen, I can see how it may possibly be of service in pneumonia. Statistics show that about 8 per cent. of all pneumonias die. How much this may be increased by *treatment* I will not undertake to say. That we may do too much medication, there can be no question. I do not mean any reflection on the course outlined by Dr. Perdue, for his clinical results have been unusually good, but I can hardly see how

he managed to get in all the remedies mentioned in his paper.

Vis medicatrix naturæ is one of our prime sources of reliance in this disease. I have pretty well simplified my treatment of pneumonia down to whiskey, nux vomica, perhaps a little quinia, and good nourishments. As to the ammonia and potash preparations, and the old-time nauseating syrups, etc., I have but little faith in them, and I am fully in accord with Page in believing that the more we husband the patients' stomachs, and economize all their physical forces, the better will the results be.

Dr. J. W. Duncan: I agree with what Dr. Griggs has said regarding veratrum veride. It has been one of my sheet-anchors in the treatment of pneumonia for twenty-five years, and I have never regretted giving it in any case of pneumonia. I have resorted to blistering a good deal, and have regretted sometimes that I did so, but of late years I do not do it, and my patients get well all the same. I believe in blistering only in rare cases, where there is acute pleuritis in connection with pneumonia. The first day or two of the disease it may accomplish some good. I think as much can be accomplished by a turpentine jacket with oiled silk as with a blister, and it is much more comfortable to the patient than a blister.

Dr. C. D. Hurt: In treating cases of pneumonia, I have usually found the temperature high, and within the last year or two I have been reducing the fever with sufficient doses of phenacetine. I give carbonate ammonia and an anodyne, such as Squibb's solution of opium in small doses. I continue the carbonate of ammonia and Squibb's opium with syrup tolu every four hours; using phenacetine every two to four hours, according to the temperature, the amount of diaphoresis, etc. In addition to this I have used blisters in pneumonia, and have had no cause to regret it. I have treated a number of cases without, and a good pro-

portion of them have recovered. Some have died. A larger per cent. have gotten well under the use of blisters than without them. I am more inclined to use a blister than to leave it alone. For the last few years I have been using a liniment composed of equal parts of turpentine and olive oil, rubbed well on the chest. There is one point which I deem of importance and wish to call special attention to, and that is the application over the chest (not only the affected lung or portion of lung, but over the entire chest) of a thick covering of cotton batting. I use absorbent cotton because it is clean and aseptic, being free from any contamination. I apply a layer as much as an inch and a half or two inches in thickness, having first rubbed on the liniment, and over the cotton I then secure a firm bandage. I instruct the nurse not to disturb it earlier than twenty-four hours. Then I remove the cotton only long enough to re-apply the liniment. With this treatment I have been pleased in many cases, because it frequently saves the necessity for a blister.

Dr. H. A. Brown: I have been practicing medicine for about twenty years, and have had considerable experience in the treatment of pneumonia. As a rule, I have applied blisters. I do not think I have ever lost a case of pneumonia, *per se*, of the single form. I have lost a few cases of double pneumonia. I believe that our success in a great measure depends upon blisters and opium. I think if a blister had been applied in the case of our beloved Grady, he might have been alive to-day.

Dr. W. B. Hardman: I live in a section of country where pneumonia prevails quite frequently, and I have noticed that a great many cases would get well, I think, if the practitioner does not do anything. The exact etiology of pneumonia is still a question of debate. In my section of country we find that in the spring and fall of the year we have quite a number of cases of pneumonia and many of

them seem to be, as it were, a simple inflammation. In other cases, we have pneumonia where it seems to act entirely different. These seem to act almost like a true infectious disease. The whole system seems to be infected with it, and it may be that these are caused by the inhalation of the pneumococcus and not by exposure entirely. I have not been practicing medicine very long, but the first two years I treated every case I saw with success, using in the first stages veratrum veride where they were able to bear it, and also giving some of them large doses of quinine, together with other drugs, as the cases required. During the first two years of my practice, I treated about twenty cases without a single death. I began to think I was "death" on pneumonia. I felt very much as if I should like to do as they say the Indians do. It is said that they burn for every disease that comes under their observation and then cure the burn. I felt like that if I could just get all of my cases to have pneumonia there would be no need of any of my cases dying, for I thought I could cure pneumonia. But recently I have changed my mind. In a recent epidemic we have had this line of treatment, but it does not seem to have any effect whatever. You may use blisters, veratrum, or anything else, but the cases go on with a high temperature, delirium, etc. There seems to be some complication of some kind in the most of them and they cannot be quieted with a reasonable quantity of morphine. They go along and finally die. These are the cases which seemed to be caused by the pneumococcus. They have complicating meningitis and peritonitis easily, and many are uncontrollable even when there are no complications. Professor Delafield says that the pneumococcus is the cause of pneumonia in all cases, but that there must be exposure in a great many cases to make the lung vulnerable to this bacteria. But many of these cases differ in severity, it seems to me, when the same amount of lung is involved,

and this is why I speak of those which seem to behave as if it were a simple inflammation and those which seem to be a general infection. In regard to the use of blisters, it makes me inclined to think that in many instances we attribute a great many things to therapeutics that we employ, when really if we did nothing at all we would have got along just as well. I imagine Dr. Perdue would have gotten along about as well if he had dispensed with some of his remedies.

Dr. Seth N. Jordan: We want to withdraw a certain amount of water present from hyperæmia, and the time to use a blister is in the first stage of this disease. I think it is generally admitted that the size of the blister should be such as to only cover a small area. One-fifth of the surface of the human body denuded produces death. In the case of children, blisters should not be used.

There is one other point I desire to call your attention to, and that is the use of oxygen in cases of pneumonia.

Dr. R. O. Engram: As to the use of blisters, clinical experience seems to favor their use. One of the gentlemen spoke of withdrawing serum from the cellular tissue which does not reach the pulmonary structures. It seems to me that a blister applied to the surface would have a revulsive effect. It would affect the terminal nerves, and they being connected with the spinal cord, might arouse the splanchnic nerves, and it would have no apparent effect on the capillary circulation of the lung. Some one, in speaking of blisters in rheumatism said, that a blister applied in rheumatism would come very near affecting any part of the body where rheumatism exists, although not put over the seat of the pain. If you have, for instance, a rheumatic pain about the shoulder or back, in the knee or leg, apply a blister at either place and it will affect the other. In what way he did not say; perhaps by its revulsive effect, or there might be some absorption of the rheumatic cause.

In speaking of blisters, Dr. Moore wants to have the experience of others and why they blister. I blister because it relieves pain, and my experience has been that patients do better with blistering than without it. I use the chloride of ammonia because of its effect upon the hepatic circulation as well as upon the lung tissue itself.

As to the use of opium and morphine, we relieve pain with them if it is not possible to get along without them—at least I do. I do not use opium or morphine if I can get along without them, as they seem to block up the secretions of the liver and lungs and my patients do not seem to do quite as well with them.

Dr. V. D. Lockhart: I desire to add just a few words of my experience in the treatment of pneumonia. I have been practicing medicine for 20 years along this line, and have treated pneumonia a great deal. I believe there are two distinct stages of the disease, and that they ought to be treated as differently as if they were two diseases almost. In the first stage of pneumonia we have an engorgement of the lung, and it does seem to me a reasonable hypothesis to give veratrum because it reduces the force and frequency of the heart's action, and at the same time a blister modifies, through the medium of the nervous system, the vital forces in some way, so that we arrive at a more satisfactory treatment.

Dr. Hurt mentioned the use of cotton batting to cover up the parts to protect from the air. I look upon this as a most valuable aid in treatment, especially in cases of children. But the point I would impress, is that when the second stage, or solidification of the lung comes on, and the heart is loaded down with overwork, all sedatives should be withdrawn, and it seems to me that carbonate of ammonia and digitalis especially come into play, with other stimulants, if indicated.

Dr. T. L. Lallerstedt: My experience in pneumonia is

that we have got very little to do. My rule is to keep the patient as quiet as possible and make hot applications according to the circumstances with which I am surrounded. If you will give morphine, Dover's powders, quinine, keep the patient as quiet as possible, together with the use of strychnia and nux vomica, your patients will do well.

Dr. R. J. Nunn: I desire to make a few remarks with regard to the remedies which have been spoken of in the treatment of pneumonia. All of them are good in their places. I wish to say in regard to the use of veratrum that you need not be afraid to use it in small doses. I wish to disabuse your mind of the fact that there is any great danger attached to the use of this drug. I will cite an instance which happened a great many years ago.

In 1854, I took over to Europe a quart of Norwood's tincture. This was the first ever taken there. I went in a sailing vessel. In Liverpool a sailor got into my stateroom and drank about a wine glass full of the tincture of veratrum. Shortly after he was taken to the hospital, and the physician in charge did not understand the case at all. He had never seen any of the medicinal effects of the drug. They were entirely novel to him. They pumped him out and he got well. So you need not be afraid of small doses of this drug.

With regard to the question of various medicines used in the treatment of pneumonia, I think there is one to which our attention has not been called, and that is common turpentine. It is certainly one of the most powerful drugs in the whole pharmacopœia. It is native with us, and yet some do not seem to use it. It is too common, but for all that it is one of our most valuable remedies whether applied externally or internally.

Another thing I would draw your attention to. We do not get as good constitutional effect from blistering collodion or the machine-spread blister as from an ordinary

blister, one which is freshly made and spread. As a protection to the chest, cotton batting is good, but the oiled silk, with or without it, is in my estimation better, and you have a better substance still in the India rubber gossamer, such as is used for waterproofs. It is cheaper than the oiled silk, equally as protective, a great deal stronger, and better for protecting the chest in every way. In regard to oxygen in the treatment, I will say that it is a valuable remedy, and one of the most difficult cases I have had to treat was that of a brother physician having double pneumonia, whose dyspnœa was constantly and successfully relieved by the use of oxygen. But what is good in one locality is not good in another. What is good treatment in the mountainous parts of Georgia may not be good in a malarial country. Nor should we forget venesection in appropriate cases. The nitrites also are often exceedingly valuable, but the character of the case, whether it be of the sthenic or asthenic type, and the idiosyncracies, constitution and surroundings of the patient must all be taken into consideration and will modify the treatment to a greater or less extent. In the treatment of pneumonia, as in everything else in medicine, the greatest, the absolute prerequisite to success is in the physician's judgment.

SO-CALLED TYPHO-MALARIAL FEVER.

BY W. P. WILLIAMS, B. A., M. D., WAYCROSS, GA.

Mr. President:

I have written this, not with the idea of simply having something to say, but to hear from the members of this society, discussion upon a subject in which I am deeply interested.

I shall not try to reiterate or answer old arguments, *pro* or *con*, but shall confine myself to what my short experience and close observation have taught me, relative to this, which I think a most important question to we Southern physicians, and a question which, in my humble judgment, we alone can answer.

The name typho-malarial fever was given to a certain disease, and its evident intent was to mean just what its name indicates, or in the words of Woodward, who suggested its name, "it does not designate a distinct type of disease, but is simply a term which is conveniently applied to the compound forms of fever which result from the combined influence of the causes of malarious fevers and of typhoid fever." They have forgotten Dr. Woodward and his definition altogether. It is used now to indicate as much a distinct type as a complication of fever. That is, a component of two distinct pathological quantities. It is essential to saying that there is a distinct and uniform pathological condition made up of two separate and distinct diseases, a proposition which finds no parallel in medicine—a double-headed pathological monstrosity. A combination of two principals which neither increases nor lessens the effect of either—merely a cordial and fraternal reciprocality

in two diseases. "Whither thou goest I will go," says malaria, "and where thou lodgest I will lodge, thy people shall be my people, thy God my God."

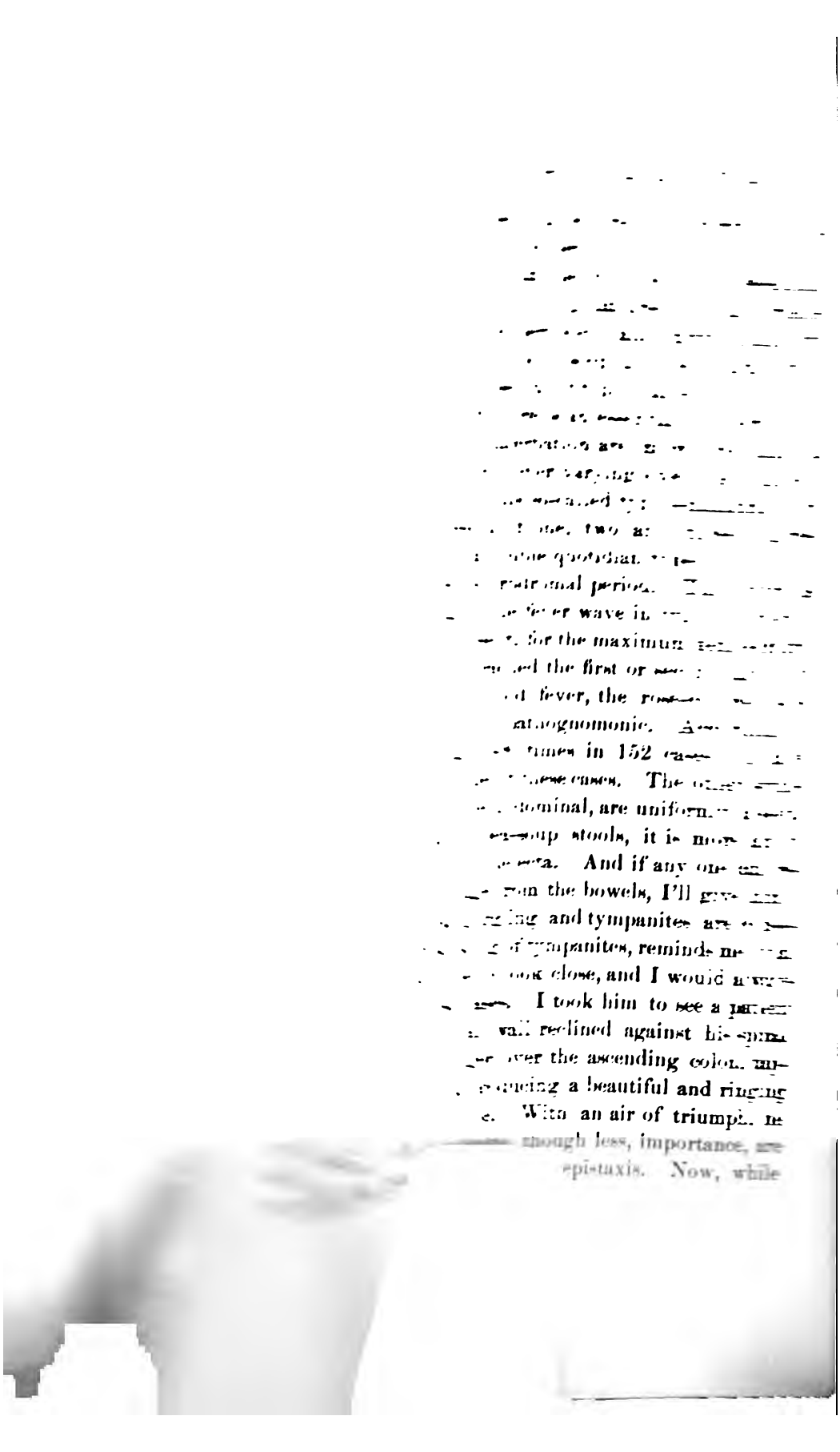
Can anything be more unreasonable upon the face of it? Is there anything like it in all the category of diseases? If malarial fever could modify typhoid fever, would it not be reasonable treatment to take typhoid fever patients into known malarial districts and give them the ague? I am tired of reading Northern authors on Southern fevers. I want to read after some more intimately acquainted, and who are brought more frequently in contact with this malady.

That there is a singular disease, which typho-malarial attempts to indicate, we will not deny, but that it is linked or related in any way to typhoid fever, we most emphatically deny. And the weight of our few remarks shall be directed towards disproving any allegiance of this malady to typhoid fever at all.

Our diagnosis of diseases must be based upon an aggregation of symptoms, some prominent and characteristic, some based upon known pathological lesions, others upon pathological phenomena, recorded by experience, with no known source for such phenomena, some pathognomonic, other incidental and confirmatory. Now if the most important of these are absent, it seems to me, it would be folly for us to make a diagnosis, but we should look for some other cause that will answer all the symptoms, and explain all the accompanying phenomena.

If all the most prominent and valuable symptoms of typhoid fever are uniformly absent, then the idea of linking these two maladies under the head of one disease, known as typho-malarial fever, is utterly invalid and absurd.

Let us take the two maladies side by side in their clinical histories, and we will find that instead of analogous



this is not always present in typhoid fever, it happens frequently enough to be grouped among its symptoms. I am yet to see my first Schneiderian hemorrhage accompanying this fever. And so with others, including subsultus and carphologia, which reasonably might occur in extreme prostration, yet, I have never seen it in this malady, showing the rarity of such prostration in this fever. Now one of the most striking differences, in my mind, is in the mental or nervous symptoms. We have in typhoid fever, in its severe types, a semi-stupor called coma-vigil, and the utterly blank physiognomy at this time, is especially striking. In this fever, these symptoms are strikingly absent, and if there is any mental or nervous effect at all, it is that of sharpening the intellect and making the faculties more acute. This has been impressed upon me by having patients, after hearing me give directions to the family, to correct them when they did not comply with my orders. In this connection, I might speak of delirium, the low muttering, sometimes becoming active and violent; and, like the rest of accompanying symptoms of typhoid fever, it is absent. I have not yet seen a case of active delirium in this fever; to the contrary, I have had patients after emerging from a most terrific attack, to speak of things that I said and did at the time when I thought them on the borderland of death. Another great diagnostic difference is complications which often arise in typhoid fever, but which never arise in this persistent type of malarial fever. Such as glandular and catarrhal inflammation, hemorrhages, and a mass of complications which have occurred in typhoid fever, but which has never, to my knowledge, occurred in this fever. Does it not seem that if typhoid fever was a factor, it would show itself in these forms occasionally? I have seen inflammations of the throat attend it. I have seen inflammation of the inguinal glands, hemorrhage from the bowels, and I am yet to see my first in this fever,

though I have probably seen ten times more cases of this malady than of typhoid.

So glaring are these discrepancies, Mr. President, that I am actually astonished at physicians using the name, let alone what it means. But speaking of names, this is the only redeeming quality for the wary physician that the word has. Let a physician pronounce a case typho-malarial fever and he has a blanket mortgage on the whole category of fevers. It means anything, from the simplest febricula to the gravest typhoid. If the patient recovers he becomes a great fever doctor. If he dies, it's the Lord's will be done. So handy and popular has become this name that typhoid fever is relegated to the rear entirely, and gropes about under the abomination of old-fashioned typhoid fever. Oh, my! Can we ever be able to reduce the science of medicine to principle, when it changes its style with the foibles of fashion?

While some have used this term as a general designation of all fevers, as I have suggested, it is entertaining to note the number of dodges the conscientious practitioner has used in endeavoring to give an honest indication of the ailment of his patient; such as "the fever," continued fever, and simple continued fever, which is essential to saying, my patient is sick.

I would think the most appropriate name, and a name indicative of what it really is, would be, persistent remittent fever. This indicates a fever of myasmatic origin, yet tenacious and unyielding in its nature. Differing, in this respect, from the common remittent and intermittent malarial fevers, which, as a general rule, yield readily to cinchona and its preparations.

If modern theories are right (and I believe they are), and the etiology of diseases is found in microbes, then there is another marked difference in the causes of typhoid and this fever. Typhoid fever is essentially an aqueous germ, and

is disseminated through water channels. This, I think, is generally accepted to be true. Consequently it is local in character, though its appearance may be modified by circumstances. On the other hand, the appearance of this persistent remittent fever is general in character, and is traceable directly to myasmatic origin, and we would call it an aerial germ. In producing this malaria, we must have present those quantities capable of producing putrification; first, a medium, as organic matter without its living principle, as dead trees, dead grass, or dead anything; next, moisture, and when I mean moisture, I do not mean the vegetation to be submerged; next, warmth, or heat, and air, and the microbe does the rest. These conditions are fulfilled whenever there is a general outcropping of this fever. And where will you find it? In my locality, mostly around old saw mill sites, where hills of saw dust and slabs furnish a hot bed for the poison. Then let the showers of August and September fall and moisten this stuff, till the slabs are sobby, and saw dust is soaked. Then let hot sun beat down upon it, and if there is not an outcropping of persistent remittent fever, it is because of the intervention of a merciful Providence.

I am confident that I am far from being alone in this opinion regarding this malady. I have submitted these observations to some of the best physicians in my locality, and I learn from old physicians, who have practiced in that district thirty and forty years ago, that prior to the advent of saw mills and turpentine stills, this malady was hardly known, but that typhoid fever did prevail, but comparatively to a limited extent. We have typhoid fever yet, and it does not exist in a hybrid form either. What condition is this immense pine belt in now? Travel through it for miles and miles, and it tells the story over and over again. Millions and millions of trees robbed of their trunks, left to sob and rot, and befoul the air. Old saw

mill sites left as monuments to the havoc that has been wrought; and then the turpentine farms, aided by the March winds and fires, disseminating destruction. I merely give this as a general cause. I know old mill pond sites that have caused the same thing. Why is it, may be asked, that malaria will assume this form in a certain locality? I don't know. Perhaps in certain peculiar atmospheric and climatic conditions, or it may be a distinct poison. I suppose that physicians in general would conclude that if an old mill pond should be turned off, and the sobby, decaying vegetation be exposed to the heat of summer, that chills and fever would be in order around its locality; such is really not the case. I have seen as little, and heard of less cases of chills and fever in this wire grass district than any place I know of. It is exceedingly rare to have chills and fever, but in lieu of it this graver form of myasmatic poisoning is produced.

I believe one of the main causes that has led to this wide-spread mistake, is in the teaching of most of our authorities that in a differential diagnosis between typhoid and malarial fever, quinine should be a strong factor. For if quinine failed to have a specific effect, then we should determine typhoid, as it excluded malarial fever. As I have stated, quinine, its compounds and all other anti-malarial preparations, as far as I have been able to determine, exert no specific effect upon this fever. I have thought quinine and Fowler's solution produce favorable results, and possibly may have modified some cases. In others, I must say, there was no visible effect, whatever, produced. The tendency, however, in these cases is most always to recover, though the fever may run into weeks. I believe with proper care, most all will recover.

Then, to sum up, we have a disease laboring under a complex title, which in no way indicates its true character; that there is never present sufficient symptoms, or phe-

nomena of one lesion, which is claimed to enter into its composition, to justify us in calling it into such relation; that there is no law among diseases, or any precedent in medicine, to show such extreme cordiality existing between two diseases, that they should occur so often joined together in forming a distinct malady; that while it is admitted that complications may occur in diseases, such complications are accidents, and should not be put down as rules; that there is in this peculiar malady, causes, histories and symptoms enough to put it under one distinct head, as of myasmatic origin, and that investigation for its treatment, should be directed along that line.

WHAT IS GYNÆCOLOGY?

BY R. R. KIME, M. D., ATLANTA, GA.

At first thought, it would seem only idle curiosity would prompt such a question. Yet, from a more careful consideration, it presents an enigma difficult of solution. If we take a retrospective view and look away back into the dim vista of the past, we learn that Hippocrates, B. C. 450, "advised fumigations in amenorrhœa and as a test of fertility. The woman who did not conceive was wrapped in blankets and fumigated from beneath, if scent passed through her body to the nostrils and mouth, then it was known that she was not unfruitful." He also "maintained that the movement of the uterus toward the head caused pain under the eyes and nose, with abundant and frothy saliva; if it moved toward the hypogastrium, it caused vomiting of an acrid, burning matter; if it moved toward the liver, caused loss of speech, clenching of the teeth, and a livid skin." It is said the "Father of Medicine," recognized the sympathy existing between the mammary gland and uterus, which he utilized by cupping them for uterine hemorrhage; that molar pregnancy in the unmarried impeached her virtue, as it was due to a superabundance of the menstrual blood, and a bad condition of the semen; that he recognized cancer of the uterus with a gloomy prognosis, treated stenosis of the os with application of verdigris and dealt at length with sterility.

Coming along down the line about twelve centuries, we find "Ætius in his writings, speaks of the speculum, sponge tent, peri-uterine cellulitis, medicated pessaries, vaginal injections, caustics for ulcers of the os, a sound for

replacing the uterus, etc." It is also said that vaginal injections were used as extensively by the Greeks as they are to-day.

Another twelve centuries brings us to the 19th century, in which fads, fashions and cycles hold sway as in olden times. To illustrate, we have only to mention that a few years since everybody slit or divided the cervix, a few years later everybody sewed it up, now everybody divulses or dilates and drains.

A few years ago everybody probed or sounded the uterus, applied caustic to ulcers of the os; now the sound is not often used and ulcers of the os are a non-entity.

Yesterday was the mechanical age; then every ill was due to displacement of the uterus, and every gynæcologist felt it his sacred duty to invent a pessary to hold the uterus into the position that suited his idea of the normal; now it is known that the uterus has no fixed position.

So we might continue to enumerate one change after another, but this is sufficient to illustrate the point.

For fear some of our professional brethren may conclude that gynæcologists are the only cranks in the profession, I will simply state none of them used Bergeon's "gas treatment" for tubercular salpingitis, nor "Brown-Sequard's elixir" for female diseases, except in the good old-fashioned way.

To return to our subject—what is gynæcology? We conclude it can only be answered approximately. Gynæcology in the past seems to have had the fiat of change stamped upon it, and so it will be until it is reduced to an exact science. Within the last three or four decades the advancement in gynæcology has been so rapid that it is difficult to keep in the line of march as the procession advances to new thoughts and new discoveries. It was within the present century that McDowell first performed ovariotomy (1809) which was an effulgent ray of light preceding a

brighter day for suffering woman. He performed the operation thirteen times with eight recoveries, which record was not equaled by any American operator until the time of Dr. Washington L. Atlee, who reported, in 1855, thirty cases with seventeen recoveries. To-day the mortality of expert operators should not exceed 10 to 12 per cent.

Ovariotomy is about the only gynæcological operation that has not been greatly abused or often resorted to without just provocation. At first it met violent opposition, but to-day stands as an established procedure. An improved technique with lessened mortality are about the only improvements since the operation was first performed.

With other diseased conditions of the female genitalia, we find the changes more marked with greater improvement in operations and treatment. A short time since, minor surgical gynæcology was in the ascendency and fashion; to-day abdominal surgery ranks first. This change has been wrought by the introduction of the principles of aseptic surgery, rendering abdominal sections safe, efficient and practical.

Pozzi says: "The present use of vaginal hysterectomy, ovariotomy, curetting, even shortening of the round ligaments is merely a revival due to the introduction of antiseptics."

As a result of this change, a new uterine pathology has been developed. To-day true pelvic cellulitis and pelvic hæmatocele are considered rare; the former has been supplanted by pelvic peritonitis, the latter by extra uterine pregnancy. A great many cases that were formerly considered due to displacements of the uterus, lacerated cervices and pelvic cellulitis, are now considered due to diseases of tubes or ovaries and consequent results. The latest fashion being to exclude pelvic cellulitis entirely except as a result of puerperal infection, and regard all such inflammations as pelvic peritonitis a result of pyosalpinx, or ex-

tension of inflammation from ovaries, tubes, or uterus. The opium (Dr. Clark's) plan of treating peritonitis has reached its zenith and is being overpowered by the exosmotic eliminative action of salines with more satisfactory results.

Oöphorectomy was introduced by a member of this society, to whom we are proud and gratified to pay him tribute. By others the operation has been greatly abused and many an ovary has been sacrificed needlessly. The reckless use of the operation is now discountenanced by the profession, while its legitimate sphere remains yet to be established, especially when resorted to for impaired mental conditions. A gynæcologist has well said "a woman has other organs beside her generative organs," a fact which should be well considered, and the diseased condition well traced from cause to effect before unsexing a woman for mental derangement with the promise of a cure. Simply the fact that a woman's mental faculties are impaired and menstrual function deranged, is no positive indication for unsexing her; as well might we conclude that a man should be castrated for mental derangement accompanied by some abnormal condition of the generative organs. The genito-urinary surgeon is more considerate; he simply circumcises the male, better fitting him for business and cleanliness. In a few properly selected cases, removal of the ovaries is the only hope of relief, but should not be resorted to indiscriminately.

Tait, whose boldness as an operator is equaled by few, has taken up that which was foreshadowed by oöphorectomy and given us some advances in pelvic surgery of material benefit in establishing the utility of certain procedures and demonstrating the frequency of extra-uterine pregnancy. His triumphs were heralded from shore to shore, and removal of the uterine appendages became a very common gynæcological procedure, and many a woman unsexed

needlessly; but to-day conservatism is being displayed, and the operation is now advised for positive indications only by gynæcologists, for such as pyosalpinx, to check growth of fibroid tumors, removal of extra-uterine pregnancies and for diseased conditions of appendages themselves.

Hysterectomy, vaginal and supra-vaginal, in cancerous conditions of uterus, is an unsettled question, some eminent authorities recommending high amputation of cervix in its stead, where the cancerous condition is confined to the cervix. As the technique improves with a lower death rate, it is probable that vaginal or total abdominal hysterectomy will take precedence. Fibroma have been treated variously, each plan having its advocates. Electricity, championed by Apostoli, held sway for a time and promised much, but has failed to accomplish what was hoped it would. Electricity has good effect in some cases, but at best is only symptomatic and palliative in relief, not devoid of danger, probably causing the death of as many as it has permanently cured.

Removal of the appendages accomplishes the same results as the menopause, and relieves several properly selected cases, while a few remain for hysterectomy as the only hope of relief, which operation is now receiving favor among gynæcologists. So far the extra-peritoneal treatment of the pedicle gives the lowest death rate (4 per cent. less), although it is not the ideal surgical operation.

In minor gynæcology we find a more unsettled, changeable condition, with at present a revival of dilatation of the os, as practiced by Goodell, dilatation and drainage (Wylie), dilatation and packing with gauze (Polk).

Dysmenorrhœa and its cogeners are no longer considered as diseases, but as symptoms or indicators of diseased conditions.

Displacements are no longer relegated to fixed supports without regard to cause or condition, but are treated by

means best adapted to the individual condition, removing, if possible, the cause. Among methods practiced may be found: Alexander's operation, hysteropexia; Dudley's operation, (*Amer. Jour. Obst., Feb., '91*); Reed's operation, (*Amer. Jour. Obst., 1892*); divulsion of cervix, (Goodell); dilatation, curetting, drainage, (Wylie); reduction of a subinvoluted uterus; and last, but not least, tamponnage of vagina, (Taliaferro), which, also, if practiced with patient in knee-chest position after reduction of displaced uterus, accomplishes the same results in a great measure as the inclined decubitis of Emmet, (*New York Obstet. Jour., Feb., '92*).

Branat and others have used massage for uterine displacements with and without adhesions, which it is to be hoped will soon become obsolete, not only on account of the dangers connected with it, but for the sake of morality, and for fear some genito-urinary surgeon follows suit by advising massage of the penis for inflammatory deposits in the male urethra, or for pathological congestions of this organ.

Ulceration of the os disappeared as if by magic when Emmet brought the torn lips of the cervix together and relieved many cases, while its usefulness is curtailed by disease of the uterine appendages, in some cases rendering it a dangerous procedure.

Operations for vaginal fistulæ have improved but little since Sims and Jobert de Lamballe established their utility, unless it be Tait's flap-splitting method.

For injuries to the perineum and pelvic fascia, quite a number of operations have been devised. For injury to the pelvic fascia and lacerations in vaginal sulci, Emmet's operation, most gynæcologists think, fulfills the indications best, while with a central tear, with or without rectocele, a Hégar or some of its modifications meet most all indications. For a superficial rent in perineum, or one complete,

involving recto-vaginal septum to a limited extent, Tait's flap-splitting methods act admirably and are used by many.

Many surgical points of interest have been omitted, and uterine therapeutics, for it is a very difficult matter to present such a subject as the title of this paper indicates, intelligently in one short article. It has not been the object of the writer to present anything new or specially enlightening, but simply to direct attention and thought to the changeableness and development of this branch of medical science and refute the oft repeated expression, "All a doctor needs for treating diseases of women is a speculum and sound with a few applications and tampons."

I am glad to say gynæcology is fast approaching a scientific basis. In the last two decades it has outstripped all other specialties of medicine in new discoveries and improved operative technique, thereby saving many of

"God's noblest gift, a woman perfected."

"The first clinic in diseases of women held in this country, was established in 1841, by Dr. Gunning S. Bedford, in University Medical College, New York," and now no medical college can afford to be without a professor of gynæcology, or at least a lecturer on that specialty, and clinics. It has also been demonstrated that gynæcology cannot be successfully taught without practical examination of patient by student under a competent instructor, with bedside observation in operative work.

Any medical college that fails to provide for such instruction in its curriculum is derelict of its duty and fails to meet the demands of the day and of humanity. This paper would scarcely be complete without stating that the South has not been asleep; that she has furnished her quoto of active original workers in this specialty; that the Southern Surgical and Gynæcological Association is maintained within her borders, and among her sons may be found such

names as McDowell, Sims, Talliaferro and Battey, with many other eminent active workers in that line.

DISCUSSION ON DR. KIME'S PAPER.

Dr. T. M. McIntosh: I desire to say a few words on the paper just read by Dr. Kime, and particularly in regard to uterine cancer, and hysterectomy as an established operation for the same. It has been my privilege to see a number of these operations by surgeons in various parts of Europe, and they all make the operation. In cases where formerly the high amputation was made for disease of the cervix, they now remove the uterus. They make hysterectomy even in cases where the body is considerably affected. I saw one eminent surgeon, Leopold, of Dresden, make the operation when the disease was extensive. He made the combined vaginal and abdominal operation, severing first the vaginal attachments and then with the patient in Trendmelberg's position, removing the womb through the abdomen. The cancer had extended so far that it was necessary to dissect it from the left ureter, to which there was a partial attachment. Leopold, who leads in the number of his hysterectomies, had made more than two hundred, with a mortality of 5 per cent.

This mortality includes those cases that have died within two years of the operation, this being the time before which a cure can be claimed free from recurrence. One of his cases is living after seven years have passed. I have seen vaginal hysterectomies made time and time again when the entire neck and part of the body of the uterus were involved.

Modern aseptic surgery has reduced the immediate mortality of these operations to so small a per cent., and the remote results have been such as to make it one of the operations of surgery. Certainly, it is frequently done by all European surgeons.

Dr. R. J. Nunn: One or two points have been brought out that are particularly valuable and should receive some attention at the hands of the members of this Association. The first to which I call your attention particularly is the unnecessary removal of the uterine appendages. I wish to give you a little experience in this matter which I had. It has happened to me more than once. It has made me think that it is positively bad practice to send our patients or have them go to our large cities to consult specialists. Of course I may be taken to task for what I say, but I certainly do believe it. I know of but very few to whom a physician could send a patient in one of our large cities and be satisfied that he would get fair, ethical, courteous treatment and his patient dispassionate diagnosis. Every one of them have their fads. Dr. Emmett is now practically out of the profession, as he is doing nothing in the seeking for practice, but he expressed the idea not long since that during a year of his large gynæcological experience, he had seen but three cases in which he could recommend removal of the appendages, and these were even doubtful, and he could not understand how it was that men, with one-fourth of his experience, in New York, could find them by the hundreds.

A case a short time ago fell into the hands of a specialist. She had been treated by another member of the profession eleven years before and had had ovaritis, which was said to be chronic, and it was not hurting her very much. She had at this time smart endometritis, and after recovering from that she went on for a change of air to a certain large city. While there some of her friends took her to a noted gynæcologist. He found traces of the old ovaritis and concluded that the case was one for operation, so that the specimen could be put in a bottle rather than be carried about her person. He sent her husband word that she would be crazy in six months if she did not have the ap-

pendages removed. Her physician asked her, what is the reason you want to have your ovary removed? It has been eleven years doing no harm, and why do you want it removed? After some consideration she decided to go home. This was a year and a half ago. It has not hurt her since and she has not gone back.

Again, patients go on to consult specialists; they operate on them, and they come back no better than when they went. There is too much faith in the knife and too little in nature.

A few years since, surgeons, or rather specialists, were operating for dysmenorrhœa by slitting up the cervix; others came along and began to sew them up. There seems to be reason for this. If laceration takes place in a case in which there is a diseased condition of the organ itself, the diseased condition of the uterus and its appendages will be attributed to the laceration. You take a patient in whom there is not this condition and slit up the cervix as Sims did, and there are no reflex symptoms produced. It must, therefore, be the condition of the organ itself, and the proper treatment is to bring the organ back in a condition of health first. If that is done, there will not be so much use for trachelorrhaphy.

The next point I call your attention to is, that we talk of ulcerations, or rather erosions, and their disappearance by bringing the lips of the lacerated cervix together. That is quite true, but only in certain cases. Did the ulceration exist before the laceration? I know of cases pregnant for the first time, that had ulcerations before, during and after the pregnancy, and which, therefore, could not have been the result of a previous pregnancy. Cases frequently come to us where there are ulcerations or erosions in nulliparous women. How are you going to cure them by trachelorrhaphy? Suppose such a woman becomes pregnant, will not that ulceration exist after the pregnancy? I have such

a case under my care now. There must be some means devised or found to cure the erosion first, and these cases are not so uncommon as we are led to imagine. I have a half-dozen such cases in nulliparous women that are very difficult to cure. Such cases cannot be benefitted by trachelorrhaphy, simply because the erosion or ulceration existed before there was any tear.

I will now direct your attention to the use of electricity. It is one of the most valuable agents we have, when properly and judiciously used; but many of the gentlemen who use it, do not use it properly, and then attribute to the agent the failure which should be credited to their own ignorance. That is the trouble. If you expect to get from it the results that you do from a surgical operation—a quick, presto change, now you see it, and then you don't—you will be mistaken. I know where electricity has been applied in a case of tumor nearly three hundred times before the beneficial result desired was produced. I have a case now under treatment in which there is a tumor about six inches in diameter, and it is gradually disappearing by the constant application of electricity. It will diminish until it disappears altogether, I hope and believe. By its use, a tumor in the course of time disappears slowly by absorption; it has grown gradually, it will disappear gradually, and just as slowly one way as the other. We must not expect any other result but the slow and gradual absorption of a tumor to which electricity is applied. It is quite true that Apostoli by the intra-mural method, or by the introduction of the electrode into the tumor, obtained brilliant results. The extra-cutaneous method can be practiced. All you want is an operator and patients, and these you have in the country. In the big cities they want the students to see operations and the results, and therefore have not time to devote to the slow method of electrical absorption.

Passing along, we come to the tamponnade, which is a very useful appliance. I wish to say here that the genu-pectoral position was the invention of Dr. Henry F. Campbell. Bozeman invented the knee-chest position, which is, also, one of the most valuable adjuncts we have to-day, and preceded the invention of the genu-pectoral position, which is *par excellence* the position in which to practice the tamponnade.

Dr. W. A. Crow: Dr. Nunn's remarks concerning the operation of laparotomy reminds me of an anecdote that has been published quite extensively in our medical journals, and which is quite in keeping with his tenor of thought. The story goes something like this: An East Tennessee doctor was in New York and attended a clinic in which there were several operations done—or, at least, three or four ovariotomies were performed during the clinic hour. After the clinic was over the doctor was speaking to the operator, and the operator asked him what he thought of the operations that he had seen. He said, "Well, doctor, I tell you, I would rather take my chances as a moonshiner in the mountains of East Tennessee than to be a uterus in New York."

But to return to a discussion of the paper. I am satisfied that the operation of ovariotomy for the removal of the ovaries and tubes is not only justifiable, but in a great many cases it is the only means of saving the lives of our patients. I am free to acknowledge that the operation seems to be overdone by some. But this is not the fault of the operation, but the fault of the men who are mistaken in their diagnosis. The point we have to learn in abdominal surgery is the same as that which the general practitioner has to work on, viz: to perfect ourselves in diagnosis, to know what the trouble is, and know what we are going to operate for, then we will not be disappointed in our result. Electricity has been touched upon, so I will

say nothing in regard to it, more than that I have found its use satisfactory in a certain class of cases, but by its improper use we may do a great deal of harm. The same rule applies to the use of electricity that I spoke of in regard to operations, that is, that our disappointments as a rule, come more frequently from the abuse of the remedy than from anything else. Electricity is not a cure-all, by any means.

HEMERALOPIA OR NIGHT BLINDNESS.

BY S. LATIMER PHILLIPS, M. D., SAVANNAH, GA.

A very peculiar condition of the eyes is this, in which they become very nearly, and sometimes totally blind, upon the approach of night. This partial blindness is noticed in a dim artificial light, and expresses itself by the patient stumbling over objects that may be scattered about a room in which he is trying to walk.

Hemeralopia is not a disease proper, but merely a symptom of some change from the normal which takes place in the eye itself. For the sake of convenience it has been divided into two groups: 1st, clouding of the media; 2d, disease of the light conducting apparatus.

In the first, we have clouding of the lens and cornea at the periphery. In a bright light, the pupil being contracted, and all peripheral rays cut off, the patient is enabled to see well; but when night comes on, or in a dim light, the pupil naturally expanding, the rays have to pass through a clouded medium, and the image focused on the retina is a blurred one, hence poor vision.

In the second division, we have to deal with disease of the light-conducting apparatus. In retinitis pigmentosa, hemeralopia is an early and marked symptom. It also occurs in other retinal and choroidac affections. It is not of this form which I wish to speak now, but of the idiopathic, which develops with very little, if any, recognizable change in the optic nerve or retina, and which, from the employment of the men usually attacked, is of the greatest inconvenience at the time. If the cause is removed—the eyes put at rest—in from ten days to four weeks

they will resume their normal condition. I will report here two cases which came under my observation recently and which will serve to illustrate what I have said:

Case 1. R. A., Norwegian sail-maker, twenty-five years old, and of very fair complexion and blue eyes. He was on the bark "Norma" sailing from a South American port to Savannah. Having reached Savannah and being incapacitated for work on account of "night-blindness," was sent to the Savannah hospital for treatment. Found on examination $V=\frac{20}{xx}$ each eye. Reads J, No. 1. Eyes perfectly normal in appearance. Five months since, while in tropics, he had an attack of night blindness, but was soon relieved, as he went ashore, and was put under treatment. Nearly a month hence, when about to cross the line coming from South America to this port, he had another attack. This came on very suddenly after sewing on white sails, and he has been totally blind at night since. Even in a dimly-lighted room, finds difficulty in piloting himself about. In daylight pupils are normal in size, and there is no paralysis of accommodation which Galezowski speaks of as sometimes occurring. In a dim light the pupils are widely dilated and the eyes have that stare so common to those who have optic nerve affections. Never bad pain in eyes. Ophthalmoscope: physiological pitting of optic disks, both paler to temporal side; possibly slight congestion to nasal side. Calibre of vessels normal; notice none of that contraction of arteries or dilitation of veins mentioned by Galezowski. R., thin crescent of pigment to nasal side. L., thin pigment ring above optic. At nasal side of choroid, tendency to mottling above edge of disk and a little inward. Both yellow spots normal. No color-blindness or contraction of visual field; apparently well nourished man.

Case 2. J. J., also Norwegian sailor on same vessel as above. A clear complexion with blue eyes, and apparently well nourished. Aet. 21. $V=\frac{20}{xx}$ each eye and

reads J. No. 1. His hemeralopia came on three weeks before I saw him, while his vessel was in quarantine. His eyes had been exposed to the bright reflection of the sun on the water. He had used his eyes for steering before the vessel reached this port. At times, the sun's rays falling on the metal compass, would reflect most brilliantly. His blindness came on suddenly. In daylight no dilatation of pupils, nor paralysis of accommodation. No contraction of field. No color blindness. Ophthalmoscope: Vessels normal. Temporal side of optics paler than nasal side. R. To nasal side thin crescent of pigment; to temporal side, thin crescent of atrophy, beyond which, in choroid a point of pigment size of pin head. L. More general diffusion of redness over optic nerve. Nasal side, crescent of pigment; temporal side, small point of pigment in choroid, just at border of optic nerve. There is here, perhaps, a slight haziness about retina, in region of optic, though one can hardly be sure.

This trouble has been more frequently witnessed among sailors and soldiers than any other class, they being more exposed to the glare of the sun, and oftentimes insufficiently fed. The disease is accompanied by no pain and inconvenience, save at night and in a dim light.

The principal cause of hemeralopia in these people is exposure of the eyes for a long time to some bright surface, which reflects the sun's rays in a dazzling manner, and particularly where the body has not been well nourished; the system having been run down by poor feeding, the weakened retina is not able to resist the strong stimulus of the bright light, and becomes torpid. Hence, when it is stimulated by a weak light, does not respond. In sailors, those who have scurvy, are especially predisposed to night blindness. Among the officers and well fed it is scarcely ever seen.

Fuchs, (Lehrbuch der Augenheil, p. 485), mentions a form of xerosis of the conjunctiva that is accompanied by

hemeralopia; on the outer and inner side of the cornea little roundish, triangular places develop, while the surface of the cornea is dry, and apparently covered with a fine whitish foam. There was none of this in my cases.

Salo Cohn (Uterus und Auge. p. 157) speaks of hemeralopia as occurring in pregnant women. He says that in bright daylight everything is clearly and sharply defined, but in twilight objects appear to be surrounded by clouds. The outlines of the larger ones become blurred, and the smaller are not seen at all. The color is faint. In bright lamp light, when the object is directly and brightly illuminated, it is clearly seen, but otherwise it is not. Hemeralopia appears generally two weeks before delivery, and disappears mostly, with but little treatment, the first nine days following. The ophthalmoscope shows nothing abnormal. The pupils generally are somewhat enlarged, but they do not lose power to respond to light.

Küstner (Berl. kl. Wochenschr, 1875, p. 583) had a case in a pregnant woman who for a long time gazed at a white surface, reflecting sunlight, and in whom night blindness appeared during the eighth month of pregnancy. Especially noteworthy is a case reported by Jungman (Schm. Jaheb. xxvii, p. 227) where the woman two weeks before delivery had hemeralopia, and ten days after delivery became perfectly blind with widely dilated pupils. Ten days later vision was perfectly restored.

Heckner (Centræhl. für Augenheil, 1881, p. 296) saw a case in which hemeralopia appeared four weeks previous to attacks of eclampsia, after which it disappeared.

Leber (Handb. von Graefe-Saemisch viii, p. 1002) reports a case in which a mother suffered from hemeralopia after nursing her child for fifteen months.

I have seen one or two cases of hemeralopia in negroes who were badly nourished, but who had never exposed

their eyes in an unusual manner to the glare of the sun or reflected light.

All of these cases easily get well when removed from the direct cause and the eyes protected for awhile. Of course the usual remedies should be prescribed for those reduced in any way from their normal health. My patients were put on strych. sulph. I will close this paper with an illustration of this trouble quoted by MacNamara, (Diseases of the Eye, p. 374) from a report of Capt. Smith, R. N. The *Merlin* captured a Spanish privateer, in September, 1801, and was sent with twenty men to cruise in her. Capt. Smith makes the following report:

"In a few days, at least half of the crew were affected with nyctalopia, (old term for hemeralopia). We were chased, one calm morning by a large xebec, carrying from eighty to one hundred men, and toward evening she was fast pulling up to us, our people having been fagging at their oars many hours without any relief. Knowing that night would deprive half of our crew of sight, it was proposed to try our strength with the enemy while it was daylight; this was answered by three cheers. The oars were run across, and the enemy by this time being within gunshot, the action commenced. After a time, to our relief, she sheered off and pulled away from us; we, in our turn, became the pursuers, but when night came on, we took special care to lay our head from the xebec, and saw no more of her.

"This circumstance put me on devising some means of curing the people affected with night blindness, and I could think of none better than excluding the rays of the sun from one eye during the day by placing a handkerchief over it; and I was pleased to find, on the succeeding night, that it completely answered the desired purpose, and the patient could see perfectly well with the eye which had been covered during the day; so that, in future, each person so

affected had one eye for day and the other for night. It was amusing enough to see Jack guarding, with tender care, his night eye from even the slightest communication with the sun's rays, and occasionally changing the bandage, that each eye in turn might take a spell of night duty, it being found that guarding the eye for one day was sufficient to restore the tone of the optic nerves. A torpor of which and of the retina is supposed to be the proximate cause of the disease. I much question whether any purely medical treatment would have had so complete, and above all, so immediate an effect.

"Persons affected with nyctalopia become perfectly blind as night approaches, and continue so until the approach of daylight; the medical treatment is bleeding and purging, blisters applied repeatedly to the temples, close to the external canthus of the eye, cinchona bark, joined with chalybeates, etc., all of which was impracticable by us, having no medicine on board our little vessel. I am aware that this disease frequently attends scurvy in tropical climates, and is sometimes occasioned by derangement of the digestive organs and hepatic system, in which case, our simple treatment would be useless; but in the above instance, it was evidently caused only by the sun."

REMITTENT FEVER.

BY ARTHUR C. BLAIN, B. C. S., M. D., MACON, GA.

Remittent fever may be defined as a miasmatic paroxysmal fever, characterized by exacerbations and remissions.

Among the various synonyms are: bilious fever, bilious remittent, endemic fever, marsh miasm, gastric malarious remittent, jungle fever and continued fever.

Before entering upon the description of this troublesome fever, it will be necessary for me to trespass upon your time by referring briefly to the poison producing the disease.

Malarial fevers. This name is given to a group, of which the poison is a protozoon, and is regularly produced without the human body. It is produced, lives and grows in the earth; and is then (we know not how) communicated to human beings, and is not transmitted from one patient to another.

They are disorders characterized by a febrile movement, hence the name. Yet we find that the same poison produces malarial cachexia, where there is no fever, but disturbances of digestion, blood, nutrition, etc.

These diseases vary much in severity, from simple, to some of the most fatal fevers.

As to its distribution, we may say that malaria is universal. Wherever man is, there will some of its forms appear, and it has been our luck, in this section of our country, to get that form which is calculated to try the patience of the physician more than any other of the malarial manifestations; although fortunately for us, its tendency is towards recovery.

It is especially prevalent in the torrid and temperate zones; cold countries are less troubled by it. The most severe cases are seen in the tropical countries of Panama, India, Africa, etc. Here we find the continued or remittent fever. Right here I wish to point out the error (that too many of us make) of using the synonym continued fever for this disease, as it is both confusing and faulty, and in doing so I think it will be only necessary to quote the definition of simple continued fever given by Dr. J. C. Wilson. He says: "It is a continued fever, not due to specific cause, usually of short duration, (24 hours to 10 days) lacking the distinguishing characteristic of the other fevers, rarely fatal in temperate climates, and showing, when death occurs, no characteristic lesion."

In this State we find the remittent form most frequently. I, for one, seldom see a case of intermittent type.

In temperate climates we can separate according to type of disease. In some localities we have pretty severe forms, but not so extreme as in the tropics. In the South and West there are places where malaria causes a number of deaths. In these localities we find that the disease does not remain continually; some years it is severe, again it almost disappears, and sometimes we find none at all. It may appear in a new locality at any time.

In the Middle and Eastern States, where it is less severe, this capacity for coming and going, is developed to a marked degree; it may prevail for years and disappear without any noticeable change in soil, or other surroundings, and after a few years it may reappear as suddenly as it left.

As regards the influence of soil and topography of country, I may say, that in the tropics we find that prevalence diminished with the elevation above the level of the sea; increases near marshes and stagnant water, especially if marshes or ponds have recently been drained. Also

when soil is cultivated for the first time, or where a field has been left idle for some time, and then taken in again. In temperate climates these rules are of no importance whatever, and the milder the type the less will it conform to these rules. It will come in high or low districts, sandy, rocky or marshy soil.

To a certain extent its appearance is dependent on seasons. In the tropics it is especially prevalent during the rainy season. In temperate climates the rule is that it is most frequently seen in summer and autumn, but my experience has been that in this locality it is more often met with in autumn and early winter. The poison of the disease is produced in the soil and is independent of human beings. Favorable conditions for growth are heat and moisture.

The negro is less susceptible than whites. Some persons seem to enjoy an immunity from the disease, while others are seized after very slight exposure.

In uncomplicated cases it is a rare thing for malaria to produce death, and consequently the opportunities for correct study of the lesions are rare. You sometimes find discolorations in some parts of the body, usually in the liver and spleen, also less frequently in the brain. It was formerly supposed that these changes were due to deposits of pigment in the tissues, but this is erroneous.

In 1881, a physician in Algiers, in studying the blood, found regular changes, besides the particles of pigment. Again in 1885, observers in Italy found the same changes constantly in the blood of these patients, and the same has been verified by observers in this country. These changes are due to the presence in the blood of protozoa which seem to belong to the animal kingdom. It makes its way into the red blood cell and is crescentic in form. Sometimes it is pale and transparent; at others, deeply pigmented. Again we find larger crescentic bodies, too large to be contained in the red corpuscles; so these float freely in the

plasma of the blood, and in these we constantly find pigment. Again, we find flaggelate bodies in the blood, whose tails are in constant motion. So these protozoa produce the characteristic lesion of the disease, and the severer the case, the more of these we find in the blood. These can be found in large numbers in the blood drawn during the febrile attack.

Quinine is a poison to these forms of life and here we have the reason why this drug is recognized as a specific in malaria.

We have increase in size of the spleen and it is less firm in consistence. The period of incubation is longer in this than any known disease, except hydrophobia. It may vary from a week or ten days to several months; the length of this period seems to depend upon exposure, climate, etc.; is shorter in hot than cold countries. A patient once attacked may carry the poison in his body for years, yet only at certain times does it recur, maybe year after year.

The invasion of the remittent form may be in one of three ways.

1. May first have several intermittent paroxysms, then change to remittent.

2. May have a prodromic period of a few days, lacitude, furred tongue, and there seems to be some deficiency of billiary matter in the stools.

3. In this class the onset of the disease is sudden. In the latter case, we are apt to have a chill or else shiverings, then the temperature begins to rise, and soon reaches 103° F. to 104° F. Face flushed, eyes suffused, intense headache and pain in back and limbs, pulse full and rapid, tongue coated and maybe nausea and vomiting. Fever lasts during all of the twenty-four hours, but not at the same height; usually remits in the early morning. May have two remissions, morning and evening. This variation in the thermometer readings seems to indicate to a certain ex-

tent the severity of the case; the higher the temperature during the remission, the severer the case.

As a rule the bowels are constipated, but you may have large watery discharges. The urine is diminished in quantity, high colored and high specific gravity; there is an increase in amount of urea. There is, as a rule, no complicating nephritis.

In the early stages of remittent fever, the tongue may be moist and large, covered with a white or greyish or yellowish coat. The edges may be indented with the imprints of the teeth—Osborne's malarial tongue.

Later it may become dry, brown and cracked, and difficult of protrusion, but seldom shows the tremulousness of the typhoid tongue.

As the disease advances, the temperature becomes higher and remissions slighter. Nausea and vomiting are the most constant and annoying symptoms in many cases.

Some cases are ushered in by a severe diarrhœa and in children we frequently have convulsions.

All the excretions are tinged with bile. Epistaxis in remittent fever is a very common symptom, and we sometimes have hemorrhage from other mucous membranes, but you seldom see general disposition to bleeding.

Enlargement of the spleen to some extent is constantly present, and to determine this a correct knowledge of the position of a normal spleen is necessary. The normal spleen is situated on the left side opposite the ninth, tenth and eleventh ribs; its posterior border is one inch to the left of the vertebral column, and its anterior border reaches to the axillary line.

Jaundice is frequently present to a certain degree, but completely developed jaundice is rare. For a better clinical understanding we will consider three types of the disease.

1. *Mild cases.* The temperature is not very high, not

over 104° F., and these are not very sick but are in bed and complain of headache, prostration, anorexia, etc. We are not anxious about these cases.

2. *Severe cases.* Temperature 104° to 107° or even 108° F; remissions not very marked and second week they look more and more like typhoid patients, emaciation, tongue and lips are dry and brown, teeth coated with sordes, alternating delirium and stupor, though the delirium shows less perversion of the reasoning faculties than in typhoid cases, and after we arouse them, we are enabled to get intelligent answers from our patients. There seems to be considerable loss of memory. They may have retention of urine and involuntary evacuations from the bowels. They lie listless on their backs and look like second and third weeks of typhoid fever; these are typhoid symptoms in malarial fever. To these cases the name typho-malarial fever has been given. The name typho-malarial was introduced into medical nomenclature by Surgeon J. J. Woodward, U. S. A., who presented a paper to the International Medical Congress at Philadelphia in 1876. The following is an extract from the proceedings, which will show the interpretation of the term. On motion of Dr. Woodward, seconded by Dr. Pepper, the following was adopted, as expressing the opinion of the section: "Typho-malarial fever is not a specific or distinct type of disease, but the term may be conveniently applied to the compound influence of malarious fevers and typhoid fevers." Hence, the term can properly be applied to only such cases where we find both diseases existing simultaneously in the same subject. I, for one, would have been much obliged to Dr. Woodward had he never introduced the term into medical literature.

3. *Malignant cases.* In these you find your patients rapidly overwhelmed by the disease. Cerebral symptoms come early and are pretty marked; they develop a dispo-

sition to bleed from mouth, nose, stomach or intestines; there may also be petechial extravasations beneath the skin. Disposition to jaundice often well marked. These are very fatal cases and need to be differentiated from yellow fever.

The cause of the disease is undoubtedly the specific germ, but certain conditions are necessary, viz: Suitable soil or pabulum, suitable moisture, suitable temperature and sufficient time for its growth and development. The poison possesses ponderability and the atmosphere is undoubtedly the medium through which it is disseminated, although as yet we are not prepared to say just how it is taken into the system. Liability to the disease is in direct ratio to the proximity to the hot bed of malaria, as we may term it. Continuous currents of air passing in one direction for some time over the breeding places of malaria, are usually followed by an outbreak of the disease.

It is a popular idea that milk often carries the poison, when left in open pans over night; also the muscadine grape which grows in low places and has a rough skin, is thought to carry the disease, and I believe the charge against this fruit, either as regards the fruit itself or the exposure during the search for it, as I have seen several cases where I thought the fever was contracted in this way. The duration of the disease is indefinite; it goes on from five days to three or four weeks or more. Many recover all right, but some, after following this type for several weeks, change to the intermittent and ultimately recover. Death seldom occurs earlier than the eighth day. During convalescence, many patients are troubled with pains in their limbs, which seem to respond to anti-rheumatic remedies better than to any others.

Diagnosis. The mildest cases of this type of fever closely simulates the intermittents, as the temperature curve is marked by sharp angles and long tracings. But

in these cases we care very little about the variety, for the treatment should be the same.

There can be no doubt that typhoid and the adynamic forms of the remittent fever are often confounded, but when the eruption appears in the former, the doubt is removed. In remittent the skin is frequently jaundiced, not so in enteric. Abdominal tenderness, except in epigastic and hepatic regions, usually absent in the former, are present in the latter; we also have the iliac gurgling. In remittent the stools are usually dark colored and bilious, with constipation as the rule. In typhoid we usually have diarrhœa and pea-soup passages or brownish yellow with mucus flocculi. If hemorrhagic tendency appears in the course of remittent it is usually from mouth, nose, stomach or urinary tract, but seldom from the intestines; while in typhoid it is the rule to have it from this latter source. Then we may be guided by the temperature chart. Lastly, a careful examination into the history will assist you in your diagnosis.

The malignant cases of remittent may be confounded with yellow fever, but with a careful attention to the following points, I think a diagnosis may be arrived at. Although I believe that in many cases the proper treatment for one would cure the other. Yellow fever is continuous; albuminous urine is the rule, spleen not so much affected, hemorrhage from the stomach, and other viscera; the rule in yellow fever, black vomit. Death is common on the third day, and in most malignant cases of remittent it seldom occurs before the seventh or eighth day. Convalescence rapid after yellow fever; slow after malaria.

The facial expression in remittent is somewhat characteristic; during pyrexia the face is flushed and the eyes injected, but redness more marked and expression more animated than in either yellow or enteric fever. The nat-

ural facial expression is better preserved than in either of the other forms of fever.

Death from an uncomplicated case of remittent fever should be a rare occurrence when properly managed; even in the worst cases where you see your patient early in the disease, the prognosis is favorable.

I shall devote a few lines to prophylactic treatment. In persons exposed to the malarial miasm it is a good plan to give daily doses of quinine (5 to 10 grains) each morning, and for them to avoid night exposure. Should you see a patient in the prodromic stage of lacitude, furred tongue, foul breath, etc., I believe that you could often prevent an attack of remittent fever by giving a mercurial cathartic followed by quinine and a mineral acid.

Actual treatment. The patient should be put to bed in a well ventilated room. They require good nursing. Regulate diet; a fluid diet is necessary and milk is the best to rely upon; you may have to boil milk and give it iced, or you may peptonize it when necessary. You can give the juice pressed directly from rare beef or give chicken broth, beef tea, etc. I believe it best to give all nourishment in small quantities and at frequent intervals.

Drugs. Should you see patient where the disease is ushered in by severe chill (which is seldom the case), you may abort the paroxysm by hypodermatic injections of morphine, alone or combined with pilocarpine ($\frac{1}{10}$ to $\frac{1}{5}$ of a grain), or you may use mustard and hot water as an emetic or give chloroform. Large doses of antipyrine have been suggested to cut short the chill, but as yet I have never had occasion to try it.

The natural tendency is to give the same drugs as in intermittents (quinine, arsenic, Warburg's tincture, etc.) and in many cases they do good, hence when called I think it good treatment to give them a trial; but, if after a reasonable time, you see that you do no good, do not push them

further. Give quinine in large doses, 20, 40, 60 or 100 grains in the twenty-four hours, and you will often be rewarded by seeing a dry tongue become moist, skin bathed in perspiration, delirium cease and patient sink into a quiet sleep. In these large doses it is best to use powders or solution.

If after a week you do no good, stop your quinine and use only a sustaining treatment for a week or so, and then exhibit the drug again, and you will often now be successful, for there is a marked difference as to the time when the drug will do good. The same may be said of Warburg's tincture. I cannot leave this drug without referring to the proper mode of administering it in severe cases; it is best given on an empty stomach, say in the early morning give from two to four drams, then do not give any food for three hours, when you may repeat the dose. For milder cases one dram three times a day will be sufficient.

In these cases, while you are using the sustaining treatment I think it a good plan to prescribe arsenic in the form of Fowler's solution 5 to 10 minims three times a day, more as a placebo than for its curative effects.

Venesection is used in some cases, but I doubt its efficacy, as we have no inflammation to combat. If they pass to the typhoid state, the heart may need supporting; stimulate by whiskey or brandy, and you may combine with it digitalis, caffeine, nux vomica, strophanthus or convallaria. If the vomiting is severe, you may control it by cracked ice, champagne, opium, chloroform, spice plaster to the epigastrium, or as I prefer, oxalate of cerium and bicarbonate of soda.

In excessive temperature, we have many useful drugs at our command with which to combat it, though I only wish for or expect to reduce the temperature two or three degrees, so as to make the patient more comfortable. For this a prescription containing tr. aconite, vin. ipecac, and

spts. æth. nit. is often useful. When this does not answer, I rely upon phenacetine as the best drug at our command, in doses of 5 to 10 grains, as the case may demand, repeated often enough to keep the patient at a comfortable temperature. Sponge baths in tepid water will be found very grateful to the patient and valuable in controlling temperature. It is my practice, in all cases, when called early, to give a cathartic, and I prefer a prescription containing quinine, blue mass, rhubarb and podophyllin, and in many cases, following this, you will find that the temperature will subside, and you can control by quinine. In the use of quinine in severe cases it is not necessary to wait for the remission, but get them under the influence of the drug as soon as possible. In milder cases it is best to exhibit the antipyretic during the period of remission.

The use of the bitartrate of potassium as a depurative drink will be found very agreeable to your patient.

Convalescence is quite slow, and often accompanied by pain in the limbs, which can be controlled by phenacetine and salol. Convalescence will be greatly assisted by a tonic of nux vomica combined with nitro-muriatic acid and some one of the bitters. At this period the appetite is often voracious and must be controlled.

Before closing I wish to call your attention to measures used in a few cases, which have given me very gratifying results, and I regret to say that I have to draw on my memory, as I have kept no case notes, so it will be impossible for me to refer to the temperature charts.

Case 1. On October 15, 1888, S. X. called at my office, showing symptoms of malaria with slight fever, which he stated had been intermittent for a week or more. I gave a mercurial cathartic and the day following I called to see him, found fever quite high and it did not go off for sixteen days. He had a marked case of remittent type. In this case the quinine affected the head, increased headache,

etc., so I gave antipyrine, which was of no value except to produce a rash over the anterior surface of the body. I resorted to the use of Warburg's tincture in the manner set forth above, and I believe it shortened the attack.

Case 2. In July, 1889, I was called to see a child six years old. I found her suffering from remittent fever, had been sick for about two weeks; after using the ordinary method of treatment for about ten days, I found my patient rapidly growing worse and vital forces failing. I told the family that I could give them no hopes as to her recovery; so I thought as she was going to die anyway, I could do no harm by giving quinine freely, so ordered twenty-grain doses of sulph. cinchonidia every three hours; after taking the third dose the fever left and the child made a good recovery.

Case 3. On October 30, 1888, was called in the country to see a patient who had remittent fever. My usual method of treatment was continued. In this case the nausea was especially marked with occasional vomiting; patient growing worse. On November 10th, Dr. H. Buford saw the case with me and as nausea was so troublesome we decided to have it over, so we gave an emetic of twenty grains of ipecac and warm water, which effectually put a stop to the nausea and soon after the fever cooled and recovery was uninterrupted.

I will only trespass upon your time to record one more case which is interesting to me from the fact that it was the first case in which I gave phenacetine a thorough test, and I have never regretted it.

Case 4. Patient X. W., male, age twenty years. On January 2, 1890, I was called in; patient stated that he had been having some fever each day for about a week; gave usual cathartic and aconite and nitre mixture, which had no effect; evening temperature usually stood at 105° F., and morning about 102° F.; once during the progress of

the case the evening temperature was 108° F. In this case whenever the temperature would rise I would give a six-grain capsule of phenacetine and could bring the temperature down 2 or 3 degrees, though I could never bring it down to normal. Patient grew very weak and it was necessary to stimulate heart, so I added digitalis and tr. nux vomica to his whiskey, which was given every second hour day and night.

The nourishment used was milk, kumyss and beef tea. Quinine, Warburg's tr., etc., were tried and had no effect, so were stopped, and only the supporting treatment used, keeping at a comfortable temperature by phenacetine and sponge baths. The fever ran for 27 or 28 days, when at 1 A. M. I ordered 8 gr. dose of phenacetine and repeated every second hour; after the third dose the patient's fever left for the first time, and his temperature fell below normal, and he had a very severe chill. I gave whiskey freely, with digitalis, put hot bottles around patient and administered 20 grs. of quinine.

This patient was soon able to be out, but exerted himself most too much, and had fever again for a few days; this was easily controlled. He was troubled a good deal with pains in the limbs, which were relieved by phenacetine and salol.

DISCUSSION ON DR. BLAIN'S PAPER.

Dr. J. J. Hill: I would like to state that Dr. Blain has given an excellent article on remittent fever, but failed to touch upon the type known as relapsing remittent fever, often involving the nerve centres, especially the spinal column, at one or more points, extending from the medulla to the coccyx. When, on examination, tenderness is revealed, blisters to the sensitive parts will often break up an attack better than quinine or other internal remedies; yet, at the same time, I give quinine frequently, combining

it with antipyrine, believing the latter to act specifically upon the spinal centres. Strychnine and arsenic are likewise excellent remedies in the relapsing type.

Dr. J. W. Duncan: The doctor has given us a very interesting paper, but he did not mention one article that I like very much in the treatment of remittent fever. I refer to gelsemium. I consider it a very fine agent in the treatment of all malarial fevers. In the use of the coal tar preparations, he gave larger doses than I have seen fit to give. I give much smaller doses. I also give them citrate of caffein, whiskey or some stimulant at the same time. I think it is safer. In the use of quinine I do not find it necessary to give the large doses the doctor gives. I think smaller doses frequently repeated will accomplish more good.

Dr. W. E. B. Davis: The doctor has outlined the symptoms of remittent fever in an admirable manner. In connection with the paper I desire to give some of my experience before I left off general practice. In Birmingham, where there are a great many cases of this form of fever, I have seen a number of different types in one family at the same time. There would be one case with a temperature of 103½ to 104 in the morning, and 104 to 105 in the evening; in another case, in the same family, the temperature would range from 102½ to 103 in the morning, and in the afternoon from 103½ to 104; in another case the temperature would be 101 in the morning, and 102 to 102½ in the afternoon, and in still another case there would be a very slight rise of temperature in the morning and not more than 101 in the evening. All of these cases being in the same family and having the same cause, must have been different types of the same fever. I had an opportunity of seeing an autopsy in one of the severe cases in such a family, and there were present the lesions of typhoid fever. A large proportion of the profession of Birmingham regard

these cases as being generally typhoid fever. All of those that have died in that vicinity, where we have succeeded in getting autopsies, have shown the lesions of this fever. I do not mean to say that all these cases are typhoid, but I think it is difficult to classify them as well as the doctor has in his paper, so as to be able to say positively, in every case, when we have a case of malarial remittent and when we have a case of typhoid fever. On the other hand the symptoms are so intermingled that it is hard to separate them.

Dr. W. R. Googe: I have had opportunities to investigate these matters, because I live in a malarial region—South Georgia. I do not think arsenic can be considered as a placebo in the treatment of malaria, because it is second to quinine in the treatment of this fever. I have succeeded in restoring my patients by the use of quinine dissolved in arsenic and nux vomica three or four times a day. I have been using these remedies for three years and have had excellent results from them, but I do not consider arsenic a placebo in the treatment of these diseases.

Dr J. M. Spence: In regard to cases of malarial fever, where they have typhoid symptoms, I find that in my experience in cases where there is intra-irritation or tympanites, mercury is injurious. I also find quinine injurious in cases of that kind. I admire the gentleman's paper and indorse his treatment with the exception of that.

Dr. T. L. Lallerstedt: In the treatment of remittent fever I agree with Dr. Duncan in regard to the use of gelsemium. I believe it is the best remedy that we can use. It is a sedative and a very good one, and in addition to that, I invariably, if there is much fever in the morning, have a sheet folded up and wrung out of water, reaching from the hips to the arm pits, and wrap that around my patient until the temperature is not more that $1\frac{1}{2}^{\circ}$ above normal. I then take it off. If the fever rises in the after-

noon I repeat it. My usual way of giving gelsemium is to put twenty drops into a glass (if I have no measure which holds four ounces), take a teaspoon and put thirty-two teaspoonfuls of water in it. I give a teaspoonful of this every hour, while the patient is weak. If there is much pain, I put in one-quarter or one-third of a grain of morphine to give ease. I also keep their bowels open, and I use one of the bulb syringes and have the bowels washed out with water at from 110° to 115° twice a day. I allow them to eat anything they want. I do not restrict them in the matter of diet except in milk. I never allow them to take milk because it coagulates in the stomach and they have got to get rid of it by vomiting. Sometimes I give quinine, and sometimes I do not. This is the usual line of treatment which I pursue, and I may say I am very successful; I seldom ever lose a case. The patients do not usually remain in bed more than eight or ten days.

Dr. A. A. Smith: I desire to say a few words in regard to typhoid and typho-malarial fevers. In regard to the use of gelsemium, the gentleman who preceded me said that it is a sedative, (I think it is especially beneficial in combating the malarial element in these diseases). I use dilute nitro-muriatic acid, and I do not think there is anything better in the treatment of these cases. There is nothing that we can reduce temperature with better than with small doses of some antipyretic, such as antipyrine, or something of that nature, but we should be very cautious to use small doses, for fear of producing too much exhaustion. Professor Flint was, I believe, the first to introduce nitro-muriatic acid in the treatment of these cases, and I consider it one of the most valuable medicines that we can possibly use. So far as quinine is concerned, I do not think we can prevent a rise of temperature. We have exacerbations and remissions in the temperature at certain periods, and therefore the temptation to give quinine during the re-

mission is sometimes great, yet I do not find quinine very beneficial, as it will neither prevent nor cut short the exaceration. In the beginning of an attack, if there should be a decided indication of the malarial element and the fever increases to a high degree, I sometimes use quinine, though I rely mainly on gelsemium and nitro-muriatic acid.

Dr. M. L. Currie: What practice I have done has been in a malarial country, and it has been my luck to have a goodly number of malarial fever cases. I practiced medicine in Brunswick, and I had some remittent fever cases there, and for one believe it is an unsettled question in reference to this fever, in the medical profession to-day. You will find some cases that present typhoid symptoms. We have tenderness of the abdomen, and I have noticed that it was not restricted to the right side, and it was generally diffuse in its character. This symptom is present throughout in some of the cases I have seen. There are other symptoms, for instance, high fever which would indicate malaria. Then there is the continuation of it which indicates typhoid fever. I do not believe there is any one case that calls for the same treatment. I believe the practitioner should treat the case according to the general symptoms presented. There are some cases in which mercury seems to have a decided effect, while in others it is harmful. I think it requires good judgment in the treatment of all cases. I believe the phenol group of remedies do harm. Phenacetine will reduce the fever quickly, but in a few hours the temperature is as high as ever. My practice is, when I am first called to see a case before I can tell what it is, to give small doses of quinine in the morning when the temperature is low. I then keep the bowels open, and in some cases I use a syringe. I believe quinine in cases of malaria is the best remedy that can be given. I regard warm sponging as the best thing that can be done in reducing high temperature.

Dr. V. D. Lockhart: I live in a section of the country where we don't suppose there is much malaria. A good many years ago we had an epidemic of this fever with all of the symptoms of which the gentleman has given a faithful description, and as one gentleman (Dr. Davis) remarked, there is such an intermingling of the symptoms that we can hardly discriminate whether we have a typhoid or malarial case. I saw the necessity in these cases of supporting the strength of the patient, and, if necessary, to use stimulants all the time. I studied the question for a long time and thought of it a great deal, and I found that there were a great many changes taking place in the system caused by septic or other poisons. During the last two years more people have died from hemorrhage and septicæmia developed in the course of this continued fever than any other cause. I have been led to believe that the sulpho-carbolate of zinc is one of the most valuable remedies we possess for disinfecting the bowels, restraining hemorrhage, and keeping the patient in a good condition; hence, I rise to urge the use of sulpho-carbolate of zinc as an astringent and disinfectant. When hemorrhage comes on, it is usually terrific. I remember a case I had a few months ago that would have died in three or four hours if something had not been done to check the hemorrhage. I put the patient on five-grain doses of sulpho-carbolate of zinc with ten grains of bismuth every three or four hours. I reached the patient about thirty minutes after the first attack, and when I arrived he was almost pulseless and nearly dead. I used stimulants also and continued to push the zinc and bismuth. He lay in a sweating stupor all that day, but had no further hemorrhage, and slowly re-acted. The sulpho-carbolate is one of our best intestinal disinfectants. In this case, after seven days had elapsed, I moved by enema, and the discharges were perfectly odorless. I have seen so much of this low, septic typhoid

state that I have concluded to do all I can to keep the bowels clean inside, and have thus far succceeded with this remedy. It does not irritate the stomach. If necessary, I give mucilage between doses when there is much irritation of the stomach. Usually there is very little irritation of the stomach. If it is necessary, I combine it with mucilage.

Dr. Mark H. O'Daniel: In the southern part of Georgia, in September, October and November, there was a perfect epidemic of malarial fever in that section. There were a number of physicians, among them Dr. Richardson, who were giving calomel, whiskey, quinine, etc. I suppose the majority of them got well. I had been taught to use Dr. Westmoreland's remedy at that time, which is iodine and creosote, where there was tympanites and a disturbed condition of the bowels. It acted very nicely with me. I usually give them first a mercurial purge, if the eyes are yellow, skin muddy, secretions suppressed, followed by small doses of quinine. In the latter stages I use quinine and carbolic acid three or four times a day, and it acts well.

When I was connected with the State Insane Asylum we had an epidemic of this fever in the wards. It is true that the river is near by, but we were cut off by pine woods. We did not think that we got it from the river. Patients commenced to feel bad for a few days. There was a feeling of malaise, eyes yellow, tongue coated, fever, vomiting, and we usually gave them a purgative of calomel. I gave magnesia citrate. I found that if we gave them good doses of calomel it would purge them a few times, but the tongue in a day or two was as badly furred as ever. I gave a bottle of citrate of magnesia every two days. We washed out the bowels with it, and in the latter stages we gave iodine and creosote beechwood acid with glycerine. Where there was any dryness of tongue, red and cracked, I used to give the turpentine emulsion. I became thoroughly convinced

that turpentine was better than creosote and iodine in the form of an emulsion, together with suppositories of tannic acid, extract opium and lead, where there was hemorrhage, etc. We had to give some quinine. One of the other physicians used phenacetine or antipyrine in doses of from fifteen to twenty grains a day. He would find in the afternoon the eyes weak, perhaps congested, and the patient in a profuse perspiration, with general indications of exhaustion. Wherever I continued antipyrine the fever went on, and patients would get beyond our control and die in spite of the whiskey we gave them. I therefore discarded antipyrine on account of its depressing effect. Shortly after that I read a paper on the subject, and a physician took the ground that it was a harmless remedy. Personally I have found it a risky remedy to persist in in cases of typho-malarial fever, so I narrowed my idea down to small doses of quinine. Perhaps in the beginning I would use from eight to fifteen or twenty grains a day if the patient was robust; if delicate, not more than ten grains, together with milk punches, citrate of magnesia coupled with iodine, with creosote in cases of bowel disturbance, but more especially the turpentine emulsion. The turpentine is a good disinfectant and antiseptic, and stimulant to the heart, mucous tract, and is one of the best remedies we can use.

As far as the use of quinine in malarial fever is concerned, there is nothing that compares with it. At Bullard's Station, Ga., nearly every section boss would die of malarial fever, unless they took quinine all the while. We found that the men who were there as section bosses would break up their fevers by taking quinine night and morning; that if they would shut up their apartments, and take five grains of quinine, either night or morning, they would go through the entire year and never have an attack of fever. One fellow got fat on quinine, and when he left Bullard's and went to Jeffersonville, a high, anti-malarial section, and

discontinued the daily use of quinine, he lost flesh, and looks worse to-day than when he lived at Bullard's and took his five grains of quinine a day, during the months of August, September and October, the chilly months in that section. I am an advocate of quinine, "creosote and iodine;" turpentine, mercurial purgation, if indicated at first, and subsequently citrate of magnesia to keep bowels open, together with whiskey punches, and general supportive treatment in the latter stages of these continued malarial fevers.

Dr. P. R. Cortelyou: I desire to give my experience in regard to the use of carbolic acid and iodine in cases of continued fever and typhoid fever. Dr. O'Daniel has just spoken of it. I have found in a number of cases where I have used that treatment—giving two drops of iodine, one drop of carbolic acid in glycerine and water every three hours, I have been able to relieve the tympanites and diarrhœa. Then, too, I have used small doses of antifebrin, or acetanilid, not enough to make a great reduction in the temperature, but sufficient to keep it down to about 101°, giving small doses of quinine and nux vomica, say eight or ten grains of quinine and fifteen or twenty drops of nux vomica in the course of twenty-four hours. I have had excellent results from that line of treatment. I had a case last summer, a lady, who was three months pregnant, and miscarried during the attack of fever. Her temperature ran up between 104–5°, yet, with the use of carbolic acid and iodine, the symptoms were, especially the tympanites, relieved nicely, and she went on to a good recovery.

Dr. A. C. Blain, in closing the discussion, said: I shall only mention a few of the drugs that have been referred to. Antipyrine has been referred to both *pro* and *con*. I have used it only in one case, and then it produced a rash all over the anterior surface of the body, and also produced some heart symptoms, and it is a drug that I at present do not prescribe for anything. With the phenacetine there is

no use to combine a heart stimulant. I do not think any man has ever seen any heart symptoms produced by phenacetine. It is entirely harmless in that direction.

Now, Dr. Davis referred to these cases as possibly being typhoid in character. I have no objection to his calling those that died typhoid fever. I do object to doctors taking cases and calling them typhoid, typho-malaria, etc., and then having them all get well and say they have cured cases of typhoid fever, whereas they don't have a death rate that typhoid fever will produce under the best treatment.

As for the gentleman who allowed his patients to eat all they wanted, I think the patients he had would have gotten well if he had let them alone, without treatment. I do not think fever had much to do with it.

THE SURGICAL TREATMENT OF PUERPERAL PERITONITIS.

BY W. E. B. DAVIS, M. D., ROME, GA.

Puerperal fever is no longer regarded as a distinct affection, a disease *sui generis*, but is looked upon as a septic fever resulting from infection during the puerperal state. The relation of micro-organisms to puerperal infection has been well-established, and is generally accepted. Peritonitis from puerperal infection requires the same consideration as septic peritonitis from any other cause.

There are many cases of puerperal fever which produce death before the peritoneum becomes involved, the infection being so intense and profound, that the patient succumbs before there are any local manifestations of the disease. Cellulitis is nearly always accompanied with pelvic peritonitis. It is a rare condition, except as a secondary affection. The extension of infection from puerperal sepsis may be through the lymphatics, or by veins, or the infection may extend up through the tubes. In the rapid form of infection, the poison is carried directly into the circulation. Where there is a general peritonitis, it has usually resulted by infection through the lymphatics, and hence, this cannot occur without general sepsis. In recent years much has been learned about the etiology and treatment of peritonitis from bacteriological, experimental and clinical study.

The following points have been pretty well settled in regard to peritonitis, from all causes, by this class of work.

A simple peritonitis may produce death from the extent of the inflammation, which is dependent upon the amount of traumatism or of the chemical irritant, and upon the con-

dition of the peritoneum. A localized, simple inflammation of the pelvis is liable to become septic through infection from the uterus through the tubes.

A septic inflammation is always produced by pus germs, either directly or indirectly; and it has been shown in an inflammation produced by pus germs, that cultures made from the products of this inflammation would produce a similar inflammation in other animals, while the products of a simple inflammation would not produce cultures capable of causing an inflammation.

The peritoneum, in a healthy condition, can take up a moderate number of septic germs and destroy them, no peritonitis resulting; while a peritoneum, weakened by some antecedent trouble, would succumb to the same number of germs and a fatal peritonitis would be developed. The number of germs introduced into the cavity with a chemical irritant which would cause the pouring out of lymph and cause a fatal peritonitis, without a chemical irritant, would be taken up and destroyed.

Where there are sufficient germs to produce a general septic peritonitis, if death results in twenty-four to forty-eight hours, there will be a hemorrhagic inflammation. I have often seen this occur in my experiments on animals. If the animal lives more than three days, there will be a purulent peritonitis. If it dies in twenty-four hours, there will frequently be an intense congestion without much fluid in the cavity, which would show that the infection had been so great that the animal had succumbed early to the poison and shock.

After these remarks on peritonitis, from all causes, I will return to this special type. I may say that puerperal infection is the principal source of pelvic inflammation. Perhaps in the lower classes gonorrhœa may play the most important part; but taking all classes, especially those in the

higher walks of life, child-bearing and abortion are the most frequent source of pelvic inflammation.

The teachings on puerperal inflammation have been very confusing. The obstetrician, who seldom ever looks on the inside of the abdomen, does not regard the disease as does the abdominal surgeon who sees the affection as it is, and hence the great variance in the teachings of the two; for, as already stated, puerperal peritonitis should be regarded and treated as septic peritonitis from any other cause. It is due to infection from a septic germ, perhaps the same as surgical septicæmia, and its local inflammations require the same treatment.

Puerperal septicæmia, as pointed out by Charpentier, may be divided into two great classes, one in which nearly all cases die, and the other in which nearly all cases get well, if properly treated. In the first class are those cases in which the whole system is rapidly infected before there is any local evidence of inflammation, and under the same heading are those in which there is a general peritonitis with general infection. Under the second class may be placed those cases of mild, general infection, with localized, inflammatory troubles. In the last class, where the disease is limited to the pelvis, we have a fertile field for the surgeon, and much good has already been accomplished in this class of cases. They are cases that are operated on several weeks after delivery, and not the cases of so-called puerperal fever which kills within four to ten days. The peritonitis that does not kill within a week or ten days may be regarded as localized, and such cases offer a chance for recovery if surgical procedures are adopted. There are many of these cases with pelvic abscesses, with septic infection, where the patient is so exhausted that nothing can be done more than to evacuate the pus, wash out the abscess and drain, so as to give the patient time to sufficiently recover to have the ovaries and tubes removed, which are the

cause of the disease, and which make it impossible for the patient to be entirely well until they are extirpated. It may be said, however, that often after the evacuation of the pus of an abscess, the appendages are so much relieved that it does not become necessary to extirpate them, they having been drained through the abscess, just as we sometimes have, and I may say *frequently* have, an appendicitis cured by a perityphlitic abscess being drained. As pointed out, the system is often infected without any local manifestation whatever, and hence no operation could offer relief. I have seen the abdomen opened in a case of this kind, in which there was no local manifestation from the sepsis except a moderately enlarged uterus. I remember to have been called in consultation by Dr. Copeland, of Birmingham, in such a case. The woman had been confined two weeks previously, and had a temperature from 102° to 104°, which had begun soon after delivery. No local trouble could be found. The uterus had been curetted, but this gave no relief. I agreed with the doctor that we might find something by opening the abdomen, but nothing was found. The woman was suffering from pure septicæmia from puerperal infection. I would not advise an operation in a similar case, for puerperal fevers that do not show some local trouble cannot be benefitted by an operation. The cases of peritonitis, shortly after delivery, in which an operation has succeeded in curing a patient, have no doubt been cases of ruptured abscesses or pus tubes which existed before delivery, and which were injured during the process of labor and caused peritonitis. There are many cases of peritonitis, more than we have been led to believe, following delivery, due to this cause, and that brings up the dangers of pregnancy with pelvic inflammation. Pelvic inflammations are seldom benefitted by pregnancy, except they be of a mild character. Severe inflammations are usually made worse, and it is not an unusual

thing, where a woman has suffered very much with localized pain during gestation, that she will have fever after delivery, which is due to an old salpingitis; and should there be pus in a tube, the tube is very liable to be ruptured and the pus emptied into the abdominal cavity, causing a general peritonitis, unless an operation is done very promptly, and it is not usual for the symptoms to be clear enough to warrant the surgeon in operating in time to save life. Perhaps when more attention is given to this particular complication of pregnancy, the surgeon may be called in at a time when an operation will be decided upon earlier than has been the practice heretofore. Cases of general puerperal peritonitis have been operated on by a number of surgeons, but the results have been very unpromising, and I will say that these cases offer but little hope from surgical procedures.

When quarts and gallons of pus are reported to have been removed from the general peritoneal cavity and recovery followed, I believe that the pus has usually resulted from a local collection, which has ruptured into the general cavity, and the operation has been done before sufficient time had elapsed for this amount of pus to result from the septic, inflammatory process in the general cavity. It is easy to understand how a gallon of pus, which has been shut off from the general cavity by inflammatory exudations and adhesions, and which has only recently ruptured into the peritoneal cavity, can be removed and recovery follow. And it is not difficult to comprehend how this condition might be mistaken for acute, general suppurative peritonitis with a gallon or a quart of pus as a result in the cavity, as the pus, by its irritating properties, will produce an inflammation which would be misleading; but the condition is quite different from what would be had if the pus had been the result of a general inflammation. True, there would be many grave symptoms, but not that extensive

local inflammation and fatal toxemia, which would result from a peritonitis which had existed long enough to give rise to so large a quantity of free pus in the cavity.

Pathological and clinical study, combined with bacteriological and experimental research, has demonstrated conclusively that where general peritonitis has become purulent, there have resulted such destructive local effects and so profound a general infection that the condition must be considered fatal.

A suppurative or purulent peritonitis is usually localized; in other words, a septic inflammation that goes on to pus formation is, as a rule, a localized inflammation, and the pus is limited by inflammatory adhesions, so as to protect the general cavity from infection. A septic inflammation that involves the general peritoneal cavity will generally produce death before pus has had time to form; and hence septic inflammation, as a rule, must be localized in order for the patient to survive long enough for pus formation.

In mild cases of infection following delivery, it is best to wash out the uterus every four hours with sterilized water, and if this does not reduce the temperature and relieve the symptoms, the curette should be used. Where this fails to give relief and no local inflammation can be made out, it is well to purge the patient and give quinine freely. Where the abdomen is tender, it is always better to give purgatives. The symptoms will usually be improved after free purgation, unless there be present a general septic peritonitis. When the symptoms are improved by this treatment, it may be known that the inflammation was a septic inflammation just beginning, or a localized septic inflammation with tympanites. The pain of a localized inflammation will be ameliorated by a free purgation. A woman with a pelvic abscess or a large pus tube will feel easier after the bowels have been made to move six or eight times. Where there is tympanites accompanying a local inflammation of the

abdomen, and when it is doubtful whether or not there is present a general peritonitis, purgation relieves the tympanites and enables one to locate the disease, as all the symptoms simulating a general peritonitis will have been relieved by a purgative, and the tenderness will then be confined to the area of localized infection; so, aside from its curative value, the purgative treatment of peritonitis is a most valuable diagnostic measure. It enables one to say whether there is a general or localized inflammation or not, although it is not possible to say in all cases whether or not there is pus. Of course if we should have a general peritonitis revealed by failure of purgation to relieve the inflammation, generally there would be very little hope of relief by surgical procedures, for the inflammation by that time would have become so general and so intense, and the system so infected that the disease would be incurable.

As stated, localized puerperal peritonitis, with pus formation, is the form of the disease that is amenable to surgical treatment. I have operated on cases where there seemed to be no hope of recovery, with favorable results. I have seen cases where the pulse was 135, get well after an operation for the relief of this condition. In 1889, I did an operation on Mrs. M., of Green Pond, Ala., for Dr. Paine, six weeks after her delivery, and removed nearly a gallon of stinking pus. When I saw the woman she was nearly dead. The abscess was opened, washed out and thoroughly drained. The woman was so weak that it was necessary to support her by rectal alimentation for ten days. Soon after the operation her pulse ran up to from 150 to 160. She is now entirely well, and has no trouble, whatever, from her ovaries and tubes.

In December, 1891, I operated on a patient for Dr. Sexton, of Birmingham, Ala., whose pulse was over 130, and who looked to be in almost a dying condition. More than a half-gallon of pus was removed from this case.

One-half of her abdomen, the left side, was an abscess. She was infected in an abortion. She had an uninterrupted recovery, and is now well.

After these operations, which may be considered incomplete, we often have to do a more radical one later for the removal of the diseased tubes and ovaries.

Frequently a fever from puerperal infection may continue for weeks where there is no pus formation, and in which the ovaries are greatly enlarged, and the broad ligament thickened with occlusion of the tubes. I have operated on such a case, where the tissues were so soft that my ligatures would cut through, and it was necessary to take up the vessels and ligate them separately. An ovary in this condition is as septic as if it contained pus. Frequently, the masses felt in the pelvis following delivery or abortion, are due to pelvic peritonitis with adhesion to the intestines and omentum, and when an operation is made to evacuate pus, we will often find in the place of pus, this condition present; but where fever is kept up and the patient's condition shows sepsis, it is wiser to open the abdomen, break up these adhesions and remove the diseased appendages, which are keeping up the infection.

WHAT SHALL WE DO WITH THE UTERUS AFTER ABORTIONS?

BY K. P. MOORE, M. D., MACON, GA.

Mrs. P., age about thirty-two, a lady from Minnesota, while in one of our southern cities this winter, had an abortion at the third or fourth month. The third or fourth day after her abortion she was allowed to be up and on her feet. She was making a tour of the South, and hence was constantly on the go. Soon after her abortion she began to have a constant flow, sometimes more, sometimes less, and never at any time feeling well. She was visiting many of the Southern cities, and about three weeks after the abortion she chanced to strike our fair city. During all this time the flow continued to increase, her strength failed, and she was now forced to take her bed. On March 4th, 1892, she was admitted into my private sanitarium. I found her with a temperature of 102, pulse 130, with considerable pelvic and abdominal pain, some tympany, and nausea; great uterine tenderness, and an area of tenderness and hardness on left side of uterus. Diagnosis—metritis, local pelvic peritonitis, with probable salpyngitis. There was a muddy, offensive, sanguinolent discharge. The next morning after her admission the temperature was 103, with a corresponding aggravation of all the other symptoms.

Could a more grave condition be presented? Every one who has had to deal with peritonitis, especially of an infectious or septic origin, realizes at once the serious outlook which surrounded this patient. The etiology and pathology in this case is plain. There remains in this uterus portions of the uterine contents of the previous conception.

Decomposition of these membranes and blood clots has been the source of infection. What shall be done?

We are taught by some authorities of unquestioned ability that the uterus is an organ whose interior is too sacred to be invaded at all. Here I have a bleeding endometrium with a septic discharge, and, under ordinary circumstances and on general principles, perhaps the most conservative gynæcologist would arm himself with a curette and attack the enemy, although he was barricaded in this sacred fort and fortified by strong and able authority against its invasion.

But in addition to this condition of the *uterus*, we have here a peritonitis, which should be gently coaxed into submission by the most tender persuasion. Would not pulling on this uterus, dilating its cervical canal, curetting its interior, and otherwise roughly handling this sacred organ, fire up afresh the local peritonitis and make great risk of its becoming a general peritonitis? My anxious solicitude can well be imagined.

Do you ask what all this has to do with the management of the uterus after abortion? I answer, much every way. The precarious condition of this patient had its origin in a failure to do for her what should have been done at the time of her abortion; and if she should have died, to a certain degree her death would, in my humble judgment, have been chargeable to a failure on the part of her physician to do his *whole* duty.

In the early months of gestation the large mass of deciduous membrane is apt to be retained after the ovum has escaped from the uterus. Even if the bulk of the mass has passed out, its firm attachment to the uterine walls renders the retention of portions of this mass quite probable. After the formation of the placenta, portions of this organ is also liable to be left; and these undetached membranes and tissues not only afford sources of sometimes constant and dan-

gerous hemorrhages, but on account of their own decomposition, as well as the decomposition of retained blood clots, become a fruitful soil for the propagation of germs and the inauguration of a septic condition hazardous to the life of the patient.

Two plans for the management of the uterus after abortions are recommended, and each have advocates of high and unquestioned ability. One, I might designate as the active or aggressive plan, the other the conservative or expectant plan. I prefer to call it expectant rather than conservative, for my idea of conservatism is not merely to stand by and see a patient get well, and trust alone to *vis medicatrix naturæ*, but true conservatism consists in active interference when necessary, and conserving the vital forces as far as skill and art, directed by sound judgment, can do it.

I would not be understood as discounting the opinions of those who advocate the expectant plan, and who hold that we should leave the matter to nature until a subsequent hemorrhage or an odorous discharge should afford an indication for active interference.

Tarnier advises non-interference even if the whole placenta is known to be in the uterus. He insists that the uterus should be allowed time to expel its contents by a due process of nature, but in the meantime he urges systematic antiseptic injections, and yields only to active interference when alarming hemorrhage or a foul odor presents the indication for interference. In France, the burden of authority is rather in favor of the expectant course. Tarnier refers to the statistics of the Charite and Maternite where he saw 46 cases of retained placenta with only one death, and that from pneumonia, but in the hospitals of Florence, where the same course is pursued, the statistics show a death rate of six per cent. In Germany, while there is great division of opinion, the preponderance of testimony is in favor of active interference. Schroeder

says: "Although the abortion must not be hastened until the os is fairly well dilated, and the ovum well separated from the uterus, but," says this eminent authority, "if any portion should remain behind, it must be invariably removed, even should the cervix have to be split on both sides to reach it." Fehling and Schwarz are also warm advocates of the active plan. Braun deprecates the early use of instruments, but advises the use of the finger whenever possible to remove the ovum. Dohrn recommends the expectant plan to the farthest limits, and Winckel advises no active interference.

In our own country, difference of opinion exists among men preëminent in their respective spheres. Such men as Munde, Polk, Wyley, and others, are decided in their teachings as to the duty and importance of active measures, while Parvin, Thomas, and other leaders, whose opinions are always entitled to the highest consideration, are on the other side of the question. Hirst, in the *American System of Obstetrics*, and to whose article I am largely indebted for the opinions of authors quoted, laconically presents the question in this way: "Is the retention of decidua, fætal membranes or placenta after abortions fraught with any danger to the woman? And is the immediate removal of the secundines after abortion necessarily a violent or dangerous procedure?"

In the decision of many matters in the practice of medicine, we are to make a choice of two evils, and it seems to me that we might present the question in this way. Which plan would be the most risky to the patient, curetting, and leaving the womb in a clean, well-drained condition, or take the chances at leaving decidual or fœtal remains in the uterus, and trust to the physiological processes of nature to rid herself of them? The answer to the question will depend largely upon the *method* pursued. If the active course is *properly* done, there is no question in my

mind that it is our duty, under all circumstances, to leave the uterus entirely clean and free from any possible risk of subsequent infection from decomposing material. If, on the other hand, it is *not properly* done, then, perhaps, safety lies on the line of expectancy.

Duhrssen has recently reported 150 cases of abortion treated by an immediate and thorough cleaning out of the uterine cavity, with only two deaths, and these in no manner attributable to the treatment adopted. His proposition is to "treat the ovum before the third month of pregnancy like a polypoid tumor, and so soon as the os is slightly dilated to introduce a curette and incontinently clear the uterus of its contents." Perhaps this is an extreme position, and I can see nothing to be lost by allowing a reasonable time for the uterus to expel its contents, and then curette.

Hirst says that after the ovum is wholly or in part expelled, everything left behind in the uterine cavity, whether thickened decidua, or placental tissue is to be extracted. This strikes me as the true conservative course.

How shall this be done?

Hirst recommends as the best instrument, especially in retained placental portions, the finger of the physician, claiming that in this way the attached portions can be recognized and peeled off from the uterine walls and easily extracted. In this I take issue with this eminent authority. Who of us have not wrestled in vain to get away those attached portions, when the uterus was out of reach, and with much difficulty the finger was barely introduced; and though the sense of touch acquainted us with the presence of foreign remains, yet we found it impossible to manipulate the finger sufficiently to detach them. Besides this, it is not possible to do the operation with the same degree of cleanliness, and as antiseptically with the finger as with the curette. The curette, speculum, depressor, tenaculum for-

ceps, and every necessary instrument can be made absolutely aseptic by boiling, which could not be done with the finger. Again, however careful we may be in cleaning the vulva and vagina, there would be some probability of conveying germs into the uterus on even a thoroughly cleansed finger, which need not be the case with the curette, for the curette need never touch the vaginal walls or external genitals at all.

How should the operation be done? It *is an operation*, and should be so regarded whenever attempted. Not only should it be regarded as an operation, but as one involving vital issues, and entitled to as much care and precaution as a laparotomy or any other capital operation; and when these precautions are taken, in my judgment, the records will show 100 per cent. of recoveries.

It has been the custom of myself and excellent copartner, for some time now, to pursue the *active* plan in every case of abortion that has come into our hands, and though we cannot, as yet, present a long list of statistics, yet we have had quite a number, and the results have been so satisfactory that we would now almost feel ourselves criminal to neglect the use of this plan.

The simplicity of the plan and the meager supply of instruments actually needed, places the operation within the reach of every practitioner. The necessary instruments are a Sims' speculum (I prefer a Munde's or Taliaferro's modification of Sims') a dull curette, a uterine or vaginal depressor, a pair of applicators or uterine forceps, and a pair of tenaculum forceps. These should all be put into boiling water for ten or fifteen minutes before use; this secures thorough sterilization. The vulva, mons, and insides of the thighs should now be made absolutely clean with soap and water, also thoroughly irrigate the vagina with the same. Now wash the genitals and vagina with warm solution of Bichlor. mercury, about 1.3000. Now place the patient in

an exaggerated Sims' position, with the hips close to the edge of the table or bed (we have always used the bed). Through the speculum we now place a large pledget of absorbent cotton, which has been soaked in the mercuric solution, against the cervix and allow it to remain here to take up any oozing, as well as to guard the cavity until other preparations are completed.

We now prepare a strip of moist iodoform gauze about one inch wide and three feet long for filling the uterine cavity, and another strip six inches wide for the vaginal cavity. These can be dropped into hot water or the mercurial solution if deemed advisable, but if the gauze has been well kept in a sealed can, and is quite moist, I do not feel that it is necessary to further sterilize it. We are now ready for curetting. Perhaps, as a general rule, it would be well to use an anæsthetic, as it not only saves pain and economizes nerve force, but it places the patient entirely in your hands without resistance. Although it is not a necessity to use the anæsthesia, as we find most of our patients prefer not to take it. Now remove the cotton from the vagina, and with the tenaculum forceps gently draw down and steady the uterus, while its entire cavity is thoroughly curetted. If the cervical canal is not large enough to admit of perfect freedom in the use of the curette, and to secure free drainage, it should be well dilated before commencing to curette. Now irrigate the uterus with warm sterilized salt water, and wash out all the debris. An ordinary soft rubber catheter attached to a pump or fountain syringe will answer every purpose. Of course there should be plenty of room for the reflow by the side of the catheter. Now, that the uterus is cleared of its contents, and well washed out, sprinkle the narrow strip of iodoform gauze with tr. iodine, or Lugol's solution, and pack the uterine cavity with it, leaving the free end in the vagina to facilitate its removal. We now sponge out the vaginal canal

with bichlor. solution, and loosely fill the vagina with the wide strip of gauze. This completes the operation.

The dressing is allowed to remain 24 to 48 hours, or even to 72 hours. I have never found the slightest odor after removing the dressing, and have never had a case that did not go on to a speedy recovery with not a single unpleasant result. I now direct a warm salt vaginal douche every day for a week or more, although there is usually but little discharge, and involution goes on rapidly and healthfully, and I have no fear of subsequent hemorrhage, subinvolution or chronic metritis.

Free drainage is one of the fundamental principles of successful surgery, and is, if possible, more applicable to gynæcological than general surgery.

In the case reported in the beginning of this paper, I promptly gave the uterus a thorough curetting and irrigation, and in ten hours' time the temperature fell from 103° to below 100°, and she went on to a complete recovery, and in seven weeks was speeding on her journey to her far away Western home. In curetting this uterus, I incurred the risk of firing up the local peritonitis into a general conflagration of the whole peritoneal cavity; which, as we all know would mean death to my patient, yet what hope was there in leaving this smouldering source of infection, which had already superinduced a constitutional septic condition, and would only feed the localized peritonitis into a general one.

I have somewhat digressed from the subject in dwelling upon the treatment in this case, for I have not intended to treat upon chronic metritis, or endometritis, in any of its forms. The object and scope of this paper is rather to suggest the means of *preventing* these conditions. And I am firmly fixed in my convictions that if *properly* done in every case, the per cent. of uterine troubles would be largely decreased, and gynæcologists would have less work to do.

In our day, when abortions are so frequent, and when the question of how to avoid procreation seems to be the great problem of our social system, this question looms up before us with no ordinary proportions.

In the time allowed me for this paper, I could spare but little space to the management of the case after the first operation. Upon the principle that cleanliness is next to Godliness, I would feel that this paper was incomplete if I did not drop a word or two of caution on this line. In the subsequent management of the case, the syringe is our chief remedy, and yet, if not properly looked after, it may become one of the most fruitful sources of infection. To use a political figure, the "neighborhood syringe" is a regular mugwump, and is in every party who may chance to want a douche or an enema. It would not take a microscope to find upon the nozzle of every such household syringe, several layers of gumy pus, mucus, blood, fæces, urine, dirt, etc., etc. Caution to the nurse along these lines will not be sufficient. *Personal* inspection is the only safeguard, and will pay a large dividend upon the time and attention of the attending physician. The sterilization and straining of the water used as a douche, will be time and trouble well spent.

One other caution and I am done. Do not allow your patient to be in too great a hurry to get up. Two or three days too long is very much better than two or three hours too soon.

In conclusion, I wish to acknowledge my indebtedness to my enterprising young copartner, Dr. James T. Ross, for much of the enthusiasm which has prompted the inditement of this paper, and for many practical thoughts and suggestions in our private discussions of this subject.

JOINT DISCUSSION ON THE PAPERS OF DRS. DAVIS AND MOORE.

Dr. James A. Goggans, of Alexander City, Alabama: Dr. Davis has said so much on the surgical treatment of puerperal peritonitis that he has left but little for me to say. I will add a few remarks, however. I cannot agree with Dr. Fordyce Barker, of New York, that puerperal peritonitis or puerperal septicæmia is fever *sui generis*. Pasteur has proven that there are many septic germs, consequently we must conclude that there are many causes for puerperal peritonitis which is a local manifestation of a general disease. If we look at the minute anatomy of the perineum, we will see that there are many lymphatics and lacunæ there that communicate directly with those of the uterus, those of the peritoneum, and even with those of the diaphragm. Professor Thompson, of Rome, Italy, has made experiments to prove this. He does it in this way: He took a filtered solution of indigo and injected it into the perineum of the cadaver. It readily traverses all of the lacunæ of the uterus and peritoneum, and even as far as the diaphragm. That was also demonstrated in the living animal, by injecting it into the testicle of a rabbit. We see at once how septic matter may be absorbed there. Now, one of the prime factors in the production of puerperal peritonitis must be explained from this standpoint, viz: what I call incomplete rupture of the perineum. For instance, the perineal body is an elastic body. No doubt many of you before now have felt the perineum suddenly give way, and sometimes have heard it give way, during the advance of the head, but upon inspection no external rupture was discoverable. Now, what took place? The perineal body was laid open, and we may have a slit of the lower portion of the vaginal tube which makes a pocket for septic germs and which is more dangerous than

when the laceration is complete. Thus, matter can be absorbed and carried into the general circulation in the manner mentioned.

I agree with Dr. Davis that there are few cases that demand surgical treatment. It is only those cases where there is a local manifestation of abscess, or something of that kind, and we should never operate unless we can actually put our fingers upon something that is causing the trouble.

Dr. Moore has given us an admirable paper. I enjoyed it very much. The treatment of the uterus after abortion is simply the prophylaxis of puerperal peritonitis. In retained placenta I generally fall upon the plan of allowing the uterus from six to eight hours to expel the placenta itself. If it fails to do it, I then proceed to remove it by placing the patient on her back near the edge of the bed or table. I use Martin's modification of Sims' speculum. It is a short bladed speculum, introduced in this way: The perineum is depressed, then by means of a pair of bullet forceps I take the anterior lip of the uterus, pull it down, then with a curette proceed to break up the contents that may be left there. After that I use the irrigator, (but I have always found it sufficient to use only the continued irrigator), and wash out the uterus with sterilized water.

Dr. R. R. Kime: I simply rise to indorse the two papers that have been presented by Drs. Moore and Davis. They are in the right line, and when the general practitioner begins to recognize the necessity of clearing out the cavity of the uterus in cases of abortion and after the maternal structures have passed off, and treat it properly, he will prevent the troubles that the gynæcologist has to deal with.

Dr. Davis in his paper spoke of the question of septicæmia, and the difference between it and putrid infection is quite marked. I wish to emphasize the fact that it is in

these cases of retained maternal structures in which the curette comes into play, and not so much in cases of septic infection. In all of the cases of septic infection the first thing to do is to clear out the cavity of the uterus if anything remains there, and see that it is thoroughly disinfected. In putrid infection is where the greatest benefit comes from clearing out the cavity of the uterus. In abcesses you incise, cleanse out, drain and do not cork up the opening with cotton or tampon. So take general principles into your practice, clear out the cavity of the uterus, and treat the uterus as you would an abscess in any other part of the body. Wash out the abscess cavity and get it in as good condition as possible. That is what you want to do in these cases of abortion after you have dilated the cervix.

I wish to emphasize the point regarding the use of the curette. I am partial to its use. It is better than the finger, because nine times out of ten the physician is liable to set up a putrid infection with his finger. He introduces his finger into the vagina without using any disinfectant, carrying patient's death-warrant under his finger nail, and the structures not being well loosened, tears the membranes away, consequently he infects his patient. Another precaution should be taken where there is putrid material in the cavity of the uterus; the cavity should be washed and thoroughly disinfected with hot water and mercuric chloride so as to destroy all the germs in the cavity of the uterus. When you introduce the finger or curette before you do that, you simply add a new source of infection by making new wounds for absorption of the putrid contents of uterus. The first thing to do is to get a bivalve or Sims' speculum, dilate cervix with steel dilators, not tents, then disinfect the uterine cavity as thoroughly as possible with mercuric chloride, then clear out the putrid material, follow with mercuric chloride, then *warm water*, and

there will be less danger of absorption when the uterine cavity is cleared out in this way. It is easily done by bringing the patient to the side of the bed, bring the cervix to view with a bivalve speculum, and with an ordinary curette you can do the work yourself without the aid of another physician. You need no anæsthetic; keep the lips of the cervix open by means of a dilator.

Now, as to the question raised by one of the speakers whether we should wait until the foul odor is established. A great many cases of the most severe infections that occur are those unaccompanied by any foul odor of discharge. If we wait until a foul odor takes place, our patients will die.

Then the question comes up of pelvic inflammations with which we have to deal when patients have a miscarriage. I call to mind a very severe and trying case that I had to deal with in the third month of pregnancy. The first indication was pelvic peritonitis, in all probability accompanied with cellulitis. There was such an inflammatory condition present that the uterus was fixed in position just as though it was plaster of Paris hardened. A miscarriage occurred under these circumstances, the fœtal structures passed off and left the maternal structures in the uterus with a severe inflammatory trouble to deal with. With a sub-normal temperature of 96½, and a pulse of 150, was I to stand by and do nothing and let my patient die? No! I dilated the cervix, although the uterus was immovable, it being firmly imbedded in inflammatory deposits; up half the distance from the os to fundus I found a constriction —probably an hour-glass contraction—with placental structures partly above and partly below it. I dilated it and curetted, thoroughly disinfected the uterine cavity, and in less than twenty-four hours thereafter the patient was on a fair road to recovery. I dilate and curette in these cases, and try to ascertain the source of infection, but more espe-

cially infection of a putrid character, and wash out the cavity of the uterus. If the general practitioner will adopt this plan when called to a case of putrid infection; if he will dilate the cervix, then clean out the uterine cavity with hot water and mercuric chloride, then use carbolic acid, tincture of iodine, or campho-phenique, a half teaspoonful in the cavity of the uterus, as they are admirable disinfectants, then in nine times out of ten in cases of abortion and indications of putrid infection he will find there will not be any discharge following this treatment, the patient will have scarcely any elevation of temperature and will be put on a fair road to recovery.

Dr. A. W. Griggs: I have been deeply interested in the two papers that have just been read. I do not know that I can add anything of interest to either one of them, but I thought I would drop a word of caution as men of my age get to be a little timid and more cautious. It seems to me that the maternal tissues to be expelled in cases of abortion are attached to the uterine wall, and have to be separated, if naturally done, by physiological process of ulcerative action, as it is in the removal of a diphtheritic membrane, or any other of a similar kind. Now, then, as we are anxious not to have absorption of the septic material, is there not some danger in using the curette too early before separation shall have taken place between the maternal tissue or membrane of the uterus? That is the point that came into my mind while the papers were being read and discussed. We are not all gynæcologists by a large majority, and we have not all the means of hospitals like those gentlemen have, and cannot have always the same opportunities of doing good that we might have. In the country we do not have as many advantages as they have in the city in these special cases, but I will tell you how we get along with them in the country. In the first place we try to prevent abortion. We resort to the usual means, using hypodermic injections of morphine.

Some gentleman yesterday (Dr. Baird, I think) discussed the use of viburnum prunifolium in these cases. I have been using that stuff for a long time, and I am ready to swear that it never did a bit of good. I would not give half a grain of sulphate of morphine for all the viburnum that grows. It is a fashionable remedy, and I have no doubt the gentlemen who have used it have a better article than I got hold of. Suppose abortion takes place anyhow, you cannot stop it. I do not see any use in trying to hurry it on. Let it alone. If the membranes are yet intact, in the great majority of cases the secundines and fœtus will come away. But after they have come away and everything seems to be clear and all right, we know that there is a possibility that there is something retained in the cavity of the uterus. If there is anything retained there, it is most likely by the adhesions, natural and physiological, and has to be thrown off in the manner I have said. But for fear that septic influences may affect the general system and you may have a case of puerperal septicæmia, I go to work and give what I consider one of the best remedies to prevent this, the spirits of turpentine, administered from the beginning, because it is not only a stimulant, but an antiseptic. It is diuretic and diaphoretic. There is more in a pine tree than any other tree in the world. After irrigation I find the lochial discharge stops, and if you have any discharge at all, it is sanious in character. Some physicians wait until a foul odor is established before resorting to irrigation. I apply turpentine stupes over the abdomen, and wash out the uterine cavity with a very weak solution of permanganate of potash. This remedy I have used for a long time, and I have succeeded well with it. Absolute cleanliness is to be observed in the treatment of every case.

I thought I would drop a word or two of caution in regard to scraping away the membrane too soon, and thus

have absorption and septicæmia take place, eventually losing the patient.

Dr. T. M. McIntosh: I have not done a great deal of gynæcological work, and I speak of these cases, not from the special standpoint, but from the basis of general principles. In regard to the remarks of Dr. Griggs, I fail to see that any general remedy would be of special good in its effects upon a general septicæmia that had a local focus for its cause. An abortion is not a physiological process, and a retained membrane is also not, and there is but one way to treat it—by its removal.

A prompt and efficient way to do this is with the curette, and when done with thorough asepsis, there is little or no danger. I can see no good in delay in the removal of membranes that are loth to come away, and do not come away. The curette in these cases is better than the finger, because you can be more thorough in your removal. You can know when all membrane is away by the different sensations that you feel when curetting the soft, velvety and yielding tissue of the retained membrane and the rougher, firm one of the sub-mucous tissue. As to the influence of internal remedies in these cases, I have very little faith in them. I have very little experience with viburnum. I think we all give remedies to effect cures, and we give them credit for what nature really does.

As to drainage, you may or may not pack the cavity of the uterus, but the cavity should be thoroughly aseptic. I should not wait, as in the case of Dr. Griggs.

As to the treatment of suppurative peritonitis, general or circumscribed, it occurs to me that we should not delay in the removal of the pus. We sometimes find collections of pus in men. Perhaps ten years ago I had such a case, which was very interesting to me. A diagnosis of typhoid had been made, and the patient was sick three weeks before I saw it. It was before we invaded the peritoneal cavity

as we do now. I aspirated and withdrew a gallon of pus. There was no circumscribed enlargement; the abdomen was uniformly enlarged. The symptoms of fever, hiccough, etc., disappeared and the temperature became normal. Three days after, again elevation of temperature, I opened abdomen and the fever again disappeared. In a few days the fever again came on with a small circumscribed enlargement near the umbilicus. Preparation to open this was made; there was pain and rumbling in the bowels, a large discharge of pus from the bowels. It was opened in the intestines. In two days the patient died.

Last year a patient was sent me that had, ten days before, been seized with violent pain over umbilical region, with pain and fever continuous. There was a large circumscribed enlargement in the middle of abdomen as a distended bladder. I opened the abdomen freely, evacuated a quart of pus, and my patient got well.

As to the treatment of pyosalpinx and other abscess of the pelvic region: A distinct pyosalpinx there is but one good way to treat it—open the abdomen and remove the tube. I have opened several abscesses in the pelvic cavity per vaginam and treated them as an abscess situated elsewhere, upon the usual surgical principles.

Dr. W. B. Hardman: In regard to the use of remedies in puerperal septicæmia as stated by the last speaker, I should like to concur with Dr. Davis in regard to the use of sulphate of quinine after the septicæmia has already begun. It was my misfortune to see three cases of puerperal septicæmia, not my own, in which the infection was carried, I presume, from one patient to another by the physician who delivered them. He delivered the other cases that were infected with septicæmia while he was attending and using uterine douches on the first, and this is why I say I suppose it was transmitted from one to the other. In these cases, together with the proper washing out of the vagina

and uterus, we used sulphate of quinine with remarkable effect. It might be thought that the good effect was due to the use of the washes; but we left off the use of quinine several times, a day or two at a time, and invariably in the course of which the temperature of the patient would run up high; she would become delirious, and would in every instance show that she was getting worse. We did this three or four times, leaving off the quinine for awhile and then beginning it again, with remarkable beneficial effect. This shows that the quinine, and not the washing, was doing the principal good.

Dr. W. A. Crow: It is unnecessary for me to again appear before you; but I was so much impressed with the importance of this subject as presented by Drs. Davis and Moore, that I am anxious to say a few words on the subject. Statistics show (and you can all satisfy yourselves by looking them up) that a large majority of the cases that come under the observation of the gynæcologist date the beginning of their trouble back to the time of a miscarriage, an abortion, or to the time of a full term delivery. If this is true, there is something wrong. There is a lack of proper treatment somewhere, and is it the part of prudence or conservatism for any of us to wait until we are attacked by the enemy? I claim that prevention is better than cure, and especially so if we can do this without incurring any risk to the patient's life. Every man who is versed in modern surgery will bear me out in saying that by carrying out strict aseptic principles we can possibly do no harm by thoroughly satisfying ourselves that the uterine cavity is emptied of its contents. For that reason it is worthless for me to add anything more than my commendation to these important and interesting papers, with which I have been very much pleased.

Dr. R. J. Nunn: In discussing the important subject which comes before the Association at this time, it is not

amiss to go back a little in the history of medicine. Of course discussions of this character must necessarily involve the improvements which have come before us in these latter days.

There was a time when we knew nothing about the curette and various other appliances that we now have. It is true, also, that women in those days got along about as well as they do now. Looking back over an experience of fifty years in medicine, I can say that I do not know of any case occurring, up to within the last ten or fifteen years, that did not get along quite as well as those that have been operated on since. That was before we knew anything about curetting, the bug theory, antisepsis and asepsis. Of course I was inoculated with the aseptic and antiseptic theories when they were first brought before the profession by Lister. I was full of it until Lister came along and knocked out his own theory, and said he was mistaken. Then, of course, I had to be mistaken too.

Well, now, the whole question resolves itself into simple cleanliness. I do not think it is necessary to use bichloride and permanganate solutions, and a thousand of others. I believe that plain, clean, boiled water will do everything. It is simply cleanliness, in the long run. Anybody in the civilized world can tell what cleanliness means, and I presume I am addressing civilized men now. Cleanliness is all that is necessary. Practitioners have used iodoform gauze in the treatment of these cases, and made the patient smell so that she becomes disagreeable to herself and those around her—even poisoning has resulted. People ask what is the matter with the patient? Oh, well, she has been the victim of antisepsis. That is all past and gone. Now, we desire absolute and perfect cleanliness, and nothing more, and that is accomplished by plain hot water. There are very few people in

the country who have not or cannot have hot water when they need it.

To go back ten or fifteen years, I ask you whether women did not get along with abortions quite as well then as they do now, when we know that the curette is used. Still, there will always arise cases which will trouble us very much. But looking back over my experience, I know of cases where the secundines were retained for days, and there was more trouble found with those cases, when physicians tinkered with them, than when they were let alone. Where the fœtus came away and the placenta was retained, the placenta finally came away. If you use the forceps and take pieces away, the chances are ten to one that by destroying the integrity of the tissue, a piece will be broken off and part of it will be retained. If you let it alone, it will come away *en masse*. That was the method years ago. I cannot to-day recall a case occurring at that time that did not get along quite as well as those we are talking about now. Of course when purulent collections of pus result, then you must operate as Dr. Davis has said. There is nothing else for us to do.

One of the speakers said that women as a rule date their troubles from an abortion. All right, but is it not a notorious fact that they are bad calculators? Very few of them can count nine successfully as you all know. Although they may date their troubles from abortion, it does not follow that they are telling the truth, although they think they are. There may be behind the abortion that which is of far greater importance, and that is a gonorrhœal or syphilitic affection. This is a point which has not been touched upon, and is of paramount importance. Some of the cases I have treated have had two and three abortions, and I commenced treating the women for syphilis. I treated the old men, too. And the consequence was that there were no more miscarriages after I

had thoroughly treated my patients, both males and females, of these families with syphilitic remedies. I want to say that a great many women will try to impress upon the mind of the physician that their troubles began with an abortion. The trouble began before the abortion. As to the treatment of the abortion proper, I believe that if the secundines are tinkered with that something will be left behind. If you run a forcep in there, and you break off a piece, it is left adhering to the wall, and the contractile power of the uterus is lost at once, as far as that little piece is concerned. I believe that in a great many cases practitioners plant the germ there themselves by meddlesome interference. Suppose a man starts to practice in the country, he has not got everything in the way of appliances; he cannot carry a galvanic battery along with him; he has got to ride perhaps 20 miles to see a case, and he cannot carry all of his armamentarium with him. The greatest men that exist to-day are those who are practicing medicine 150 miles from everybody. I read not long ago of a physician in Australia, who is the grandest man I have read of in medicine, who performed a craniotomy with a pair of tongs and a gimlet. That is what I call a great man. Is there anything else that we can do, in such cases as we have been considering, except to scrape out the uterus with a curette and any other kind of thing which the country practitioner may not have? I think there is.

Those of you who were present at the meeting of this Association, held at Augusta, will remember that I brought before you a suggestion for treating metrorrhagia. I did it for the purpose of giving it to the profession, feeling that it was my duty to do so; and bringing this plan down to the wants of the average practitioner. It was not mentioned with the idea of bringing great things forward that physicians can do only in our large cities and nowhere else, but I introduced this little plan for the country practitioner

so that this condition can be treated away from the great centers of civilization. I think there is too great a tendency toward concentration into the great cities, and we are not building up our local profession enough. If you take a case of metrorrhagia early enough and treat it as I mentioned at that time, you will find that upon your tent, when it comes out, there will be more or less pieces of retained placenta or fungus growth. You can treat your patient just as well in that way as if you used the curette. I do not object to curetting where it can be done, but there are a great many cases where it cannot be done, and I would suggest my plan as one of the means of treating these cases where you have not the curette. (For full account of Dr. Nunn's method of procedure, see Transactions, 1891, p. 60). One of the best applications to the endometrium that I know of is turpentine; it can be used either pure or saturated with camphor. You can also, if desired, dissolve iodine in it to a large extent, and I do not know of a better application that turpentine, camphor and iodine in some conditions of the endometrium.

Dr. J. W. Duncan: I just want to say a few words on this subject. Dr. Crow has said that many patients who come to the gynæcologist date their bad health to abortions, or delivery at full term. That is true in some cases, but many of the cases have a different cause, and their trouble precedes an abortion. The wife is grealy alarmed, the husband is alarmed, he sympathizes with his wife, and he says this thing shall not happen any more. Very soon after this abortion, they do not cease to have intercourse, but they use condrums and many other things to prevent conception, in this civilized country. This great evil is growing every year in our cities to an alarming extent. That is one of the chief causes of so many cases coming to the gynæcologist.

Dr. J. G. Hopkins: I would like to ask Dr. Nunn if I

am right in inferring from what he said, that he believed the specialist in the treatment of women created most of the diseases he was called upon to treat? That has been my opinion for some years, and I want to know whether I have a supporter in him?

Dr. Nunn: I did not exactly say that. It would be carrying the thing too far. I cannot tell the truth, evidently, but I will make another effort. What I wanted to say was this, that in tinkering for the secundines of an abortion the probabilities were that portions were broken off and pieces of the placenta would be left, and these would serve as a nidus in producing disease itself; whereas, if the placenta was left entirely undisturbed, contractions would take place normally and it would be expelled *en masse*. It is just the same if you tinker with the placenta in a case of full term labor; if you let it alone it comes away of its own accord. If you go to work and commence tearing it you never get it away.

I desire to call your attention to another point which I overlooked in my previous remarks. In washing out the cavity, the use of large quantities of hot water is one of the best things that can be adopted. When you have anything in the ear, you wash it out with large quantities of hot water. You do not use a syringe, but the stream is thrown into the ear. There is nothing to obstruct the return of the water; you can drain all you want. The best way to wash out the uterine cavity is to first dilate the cervix, pass a syringe up a short distance from the uterus, then throw water up to the body of the uterus; in that way you reach the whole of the uterus up into the cornu.

Some one suggested that the way to treat cases of pyosalpinx was to cut down upon them. It is not. If they are given half a chance these cases will empty themselves through the uterus itself. I treated a case not long ago of pyosalpinx in which a cure was effected by needling. After

the os is dilated, you can pass a bougie up into the dilated canal without a great deal of trouble, as it is patulous, and then by passing a bougie carefully up into it you can empty the pyosalpinx. But there are cases where this cannot be done and in which an operation is necessary. We can adopt this plan in a great many cases and thus do away with the necessity of an operation.

Dr. K. P. Moore said: There is but little left for me to say. Drs. Nunn and Griggs have wandered so far from the subject at issue, and have said so much that is entirely irrelevant to the question, it leaves little to be said. The words of caution from such nestors in our profession as Dr. Griggs should always be appreciated, and I am entirely with him in reference to hastening abortion. My paper was devoted entirely to the management of the uterus *after* abortions, and so Dr. Griggs' remarks, so far as they touched the subject under consideration, were entirely inapplicable.

I had the pleasure of hearing Dr. Thomas deliver his twelve lectures on abortion before the College of Physicians and Surgeons of New York several years ago, and if there was any one thought which riveted itself upon my mind more than another in these very enjoyable lectures, it was that of *waiting patiently* for the uterus to manage its own affairs, and when the gentlemen who have just preceded me saw fit to attack my position, and to caution against too great haste in invading the uterus, they have done me great injustice.

Dr. Griggs: I wish to interrupt Dr. Moore to say that I was greatly interested in both his and Dr. Davis' paper, and simply uttered a word of caution, and that I did not *attack* his paper.

Dr. Moore: I did not mean that Dr. Griggs *attacked* my paper in the sense of an intentional reflection. I do not feel that way at all. The remarks of Dr. Griggs would have been applicable to the paper of Dr. Crow, read before

the Association yesterday afternoon. Dr. Griggs says that any remains after an abortion will be separated by physiological processes, viz: that of suppuration, if left alone. This may be true or not; we do know that these shreds often become organized, and are sources of constantly recurring hemorrhage. Besides, if they are separated by suppuration, this very process, with the decomposition of these tissues, subjects these patients to septic peritonitis, or general septicæmia, and ultimate death. Hence it seems to me that the plan advocated in my paper of always leaving the uterus in a clean, healthy condition, free from these possible risks, is the most rational one.

In answer to the position taken by Dr. Nunn that women in olden times did as well, and as few of them died, as under the modern management, I very greatly question the truthfulness of the position. In the absence of statistical facts, I am not prepared to contrast the successes and failures of ancient and modern plans of management, but the course marked out in my paper seems to me to be quite rational and consonant with common sense and good judgment. I recall one instance just now, occurring in my practice over twenty years ago, when I was a boy in the profession, where I had a lady to bleed to death before my eyes, because I did not then know the value of the curette, and had been taught to reverence the interior of the uterus as a place too sacred for invasion by a tyro in the profession.

Dr. Nunn mentions syphilis as one of the fruitful causes of abortion. On this question there is no issue; whatever may be the *cause*, the great underlying principle of a clean uterus and free drainage remains, and I am still as firm in my conviction of our duty as before the inditement of my paper.

Dr. W. E. B. Davis: I desire to thank the gentlemen very much for their uniformal indorsement of my paper.

I will only refer to one or two points emphasized by those who have taken part in the discussion. However, before doing so, I want to add my thanks, with the other members of the Association, to Dr. Moore, for the paper he has read. I think his paper teaches us doctrine that we should all practice. We should accept the paper *in toto*. There is no reason for any man practicing medicine who is unable to carry out the teachings he has enunciated.

In reply to Dr. Nunn, I will say that gonorrhœa is now considered a more frequent cause of abortion than formerly, and that there is an explanation why a woman dates her trouble from an abortion and not from an attack of gonorrhœa. We know, as shown by the experiments of Sinclair, that the gonococcus is not a very septic germ. Women have gonorrhœa and do not develop very bad symptoms until after an abortion, when she gets a very infectious germ in connection with the gonococcus. She then has a mixed infection, and this is a serious condition and explains why a woman with gonorrhœa may not have severe and noticable pelvic trouble until she has had an abortion. The doctor speaks of passing a sound into the tubes through the uterus for the relief of pus tubes. I must say that this is very rarely possible, and should never be recommended as a line of treatment. Dr. Nunn should remember the case that occurred in Vienna, which happened in the practice of a professor in the University, who demonstrated in his clinic that he had passed a sound into the Fallopian tube, by having the students come down and feel the end of the sound through the abdominal wall. In a few days the patient died. Then the pathologist took charge of the case and it was found that the openings into the tubes were too small to admit of the introduction of the smallest sound, and the uterus was found full of small openings made from the punctures of the instrument. It is a well-known fact that the openings into the tubes are too small to introduce

a sound, and furthermore, any man who has had much experience in abdominal work and who has removed many pus tubes, knows that there are innumerable constrictions in these organs when full of pus, sometimes there being sacs of pus entirely separated from one another, and that there is more danger from emptying the pus into the peritoneal cavity than from draining it through the uterus, even though a sound could be introduced through the uterus into the tubes. We should not be guided by exceptions to rules in our treatment.

I was much pleased with Dr. Griggs' remarks in reference to not hastening an abortion, because, by retarding the process, the membranes would be loosened up and the entire contents of the uterus would come away together. By following this plan we will have less use for dilating the cervix and using the curette.

There was one point brought out by Dr. Hardman in reference to my paper, which I desire to touch upon, and that was in reference to the use of quinine. I have had abundant evidence of the beneficial effects of quinine on septic fever. I think it is better contrasted with antikamnia. Take a mural abscess where the temperature runs up to 102 in the afternoon, if you use antikamnia for a few days, when it is left off, the temperature will go higher than before its use was begun. The antikamnia seems to put the system in a condition that it cannot resist fever. If you will discontinue your antikamnia and use quinine, it will generally reduce the temperature. Good results can be gotten from ice bags on the abdomen in reducing temperature, where they are agreeable to the patient.

Dr. R. J. Nunn: The gentleman who has just taken his seat spoke about antikamnia, which is a patent medicine, just as much so as the three P. P. P.'s or S. S. S. If it is not, then of course, we are at liberty to use and to talk about it. Personally, I do not use it because it is a patent

medicine. I understand it is composed of bicarbonate of soda, acetanilid and citrate of caffein. That is my understanding of its composition. I do not think we should go on record as an Association indorsing a patent medicine like antikamnia. I have written to the manufacturers, asking them whence they derived the name. They would not tell me; in fact, did not answer my letter.

Dr. Davis: I simply contrasted antikamnia as a type of antipyretics. I believe it is a proprietary medicine. Antipyrine is also a proprietary medicine. As I have before remarked, we will get better results if we use antipyretics less frequently, for they certainly have a depressing effect. I think we had better use quinine and cold water, as recommended in the paper, and very exceptionally resort to antifebrin, antipyrine and antikamnia in these cases.

COUGH: SOME OF ITS CAUSES AND ITS TREATMENT.

BY CHARLES DUNBAR ROY, A. B., M. D., ATLANTA, GA.

The euphonic word which forms the caption of this paper is one familiar to every physician and to every household. No gilded mansion nor humble hut has ever been able to bar their doors against its entrance. No clime, no class, no age can claim it as their own, for its name is but the heritage of the whole world. The aged mother whose tottering frame leans upon the arm of a stalwart son has been a victim of its wrath; the little swaddling infant, the first jewel which crowns a mother's maternity, has not escaped the sufferings which it brings. As the family sits around the hearthside at eve, how often does a croupy bark from one of the little ones strike terror in a mother's breast, heralding, as it were, the approaching sleepless night. It is not surprising, then, that I should bring before you to-day a subject so commonplace, and yet one of such extensive domain, for it is always the every-day subjects which seem unlimited in their scope. Nor do I wish to place myself before you as one with narrowed views, for that day is fast being relegated to the past which considers that the knowledge of a physician or surgeon must be limited entirely to his own line of work. They are the best physicians who are able to be specialists in any branch of medicine. The tendency to "hobbies" is now too prevalent among all classes of the medical profession, and often to the detriment of their patients. Some would have us believe that most of the subjective ills of mankind are due to refractive errors or muscular insufficiencies of the eyes, while our brother gynæcologist would take issue with such and prove, beyond

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the shadow of a doubt, that the same troubles are caused from a prolapsed ovary or an undue size of the same. The subject I have chosen is one limited to no class of physicians, but especially from the general practitioner does it often draw the most thoughtful consideration. It is not my purpose to bring forward any startling innovation, nor to treat in their entirety the diseases with which cough is associated (a task far too momentous), but simply to group the etiological factors of this symptom in such a manner as to aid us in making a ready and reliable diagnosis.

A cough, according to Landois, consists in a sudden, violent expiratory explosion, after a previous deep inspiration and closure of the glottis, whereby the glottis is forced open, and any substance, fluid, gaseous or solid in contact with the respiratory mucous membrane is violently ejected through the open mouth. This act, as we all know, is voluntary or involuntary—voluntary in so far that we can produce it at pleasure, and involuntary or reflex in that a point is often reached in bronchial irritation, or from any other cause, whereby, with all our will power, we are unable to stay the act. Kohts, in Landois' Physiology, has located a coughing center a little above that of the inspiratory in the medulla. According to this experimenter, the afferent paths are the sensory branches of the vagus, and the efferent lie in the nerves of expiration and those that close the glottis. That there are other paths there can be no doubt, as can often be seen from clinical experience, though by far the largest amount of work is done by the latter nerves. So important is the par vagum in our coughing miseries, that the refreshing of our minds with the anatomy of its sensory branches will not be amiss.

Dr. Leaming, of New York, has well said, "The par vagum is a chummy, friendly nerve. It is the source of all our friendships. We dine together, meet together, drink together by its influence." The pneumogastric, or tenth

cranial nerve, has its origin from a nucleus in the medulla oblongata along with the ninth and eleventh nerves, and, passing forward, it leaves the cranium through the jugular foramen, being enlarged at the latter point into what is known as the jugular ganglion. Its main sensory branches, and hence those most involved in cough and most important to us, are as follows:

1. The auricular branch, coming off from the jugular ganglion, receiving connecting branches from the glossopharyngeal or ninth, crossing the facial and giving sensory branches to the posterior portion of the auditory meatus and the adjoining part of the outer ear.

2. The pharyngeal plexus is aided in its formation by branches from the par vagum and from the ninth. From this plexus sensory branches supply the soft palate, arch, and probably the posterior portions of the inferior turbinate bones.

3. The superior laryngeal, the sensory nerve to the base of the tongue and all the mucous membrane of the larynx, is preëminently the nerve of cough.

4. The pulmonary branches of the vagus join the anterior and posterior pulmonary plexuses, and hence, from this source, supply sensory (cough exciting) fibres to the whole bronchial system, lungs and pleura.

5. The sensory fibres to the stomach and also the liver, and through connections with the great solar plexus, probably send fibres to the organs of generation.

From this brief anatomical exposition, we see from what sources irritations may come in producing cough and, being thus fortified in our knowledge, we are better enabled to seek the proper source.

The character of a cough depends largely upon the locality and nature of the cause of which it is a symptom. For we must bear in mind that we are not discussing a disease, a distinct entity, but a symptom of a diseased or

morbid state, and it is the latter condition which determines its character. Various words have been used as descriptive of a peculiar kind of cough, and it is well for us to pause for a moment and consider in our minds the meaning of such adjectives most frequently used, as *brassy* or *metalic*, *hoarse*, *spasmodic*, *jerky*, *hacking*, *croupy*, *rasping*, *etc.*

When we speak of cause in relation to cough, we, of course, mean those pathological conditions with which it is associated, by the removal of which the cough ceases. We cannot say that enlarged faucial tonsils always produce cough, but that they are sometimes a causal factor, we must admit, since a persistent cough often ceases upon the removal of these organs. Hence, in this article, we shall try to consider all those factors which, in the light of clinical experience, have been found to have aided in the production of this symptom. In all diseases of the lungs and pleura, cough is a prominent symptom, but to discuss the diseases of these organs would extend this paper beyond a reasonable length; so that, with the exception of a passing remark, the points of the article will be confined to the respiratory tract above the bifurcation of the trachea. To make a classification of causes with distinct lines of demarkation is difficult indeed, but simply to aid us in the study, I have made the following arrangement:

CAUSES.—1. Such as are dependent upon an acute pathological state of the respiratory tract. (*a*) Lungs and Pleura; (*b*) Larynx and Trachea; (*c*) Pharynx.

2. Functional, or such as are dependent upon pathological states or deranged functions more or less chronic. (*a*) Nasal; (*b*) Pharyngeal; (*c*) Laryngeal; (*d*) Auricular; (*e*) Gastric; (*f*) Hepatic; (*g*) Reproductive.

1. (*a*). *Lungs and Pleura.* In all acute and chronic diseases of the lungs and pleura, cough is a prominent symptom, as one would naturally expect from the anatomical distribution of the pulmonary plexus. How familiar to

many of you is the short, dry, jerky cough with the accompanying stitch in dry pleurisy? How, also, the deep basilar cough of pneumonia? With a pulmonary cough, there is usually the accompanying expectoration, sometimes labored and even requiring several efforts before it succeeds, while in pleurisy there is nothing to eject, and, consequently, the cough is dry and hacking. In acute and even chronic bronchitis, cough is one of the most distressing symptoms and one which causes the patient many a sleepless hour. The accumulation of secretion in the bronchial tract is frequently the most irritating factor, for we often note how aggravated a cough is in the early morning hours before the expulsion of the secretions which have accumulated during our sleeping moments. Who has not seen this, the most distressing symptom in phthisis pulmonalis? Cavities in the lungs are always exciting factors, for it is here that the dirty purulent secretions find a never-ceasing abode. Dr. Leaming, of New York, has recently called attention to the first paper of Dr. G. P. Camman, in which the latter dwelt upon the management of lung cavities by position, thus showing how one of the most harrassing symptoms of this dreaded disease could be alleviated. The idea is based upon the fact that if you make the patient lie so that the cavity can be thoroughly emptied by cough and gravity and he then be made to turn back, allowing an interval for its refilling, he can, in this way, secure at night several hours of needed rest. If the cavity is not thoroughly emptied, the constant running over, as it were, from the mouth of the reservoir acts as a continual source of irritation.

(*b*) *Acute inflammation of the larynx and trachea* has, as one of its commonest symptoms, cough, either dry or moist. The congestion thus occasioned by the inflammatory state, together with the increased amount of secretion which is usually present with it, acts as an irritant to the

nerve terminals in this locality. Upon this theory, therefore, the richer a portion of the tract is in nervous supply, the more irritable will it be, and the more harrassing and persistent will be the cough. Physiologists tell us that a cough cannot start from an irritation in every portion of the respiratory tract, but that there are certain areas only which are supplied with nervous irritability. These are the glottis respiratoria and the bifurcation of the trachea; other portions, they say, as for example, the true vocal bands, are more or less insensitive. These facts are based exclusively upon the experiments of Kohts and Vulpian. Theoretically, this may all be true, but practically, we know that cough comes from irritation in any portion of the tract, and, in inflammatory conditions, we cannot limit this state to any circumscribed area. The character of a cough originating in the larynx and trachea is determined by the character of the existing pathological state, or the anatomical formation of the region, according to the age of the individual. The tone of all coughs is modified by the condition of the larynx, and especially that of the true vocal bands, whether there be true œdema, or exudative material upon their surface. If, with a croupy cough, there is free expectoration, how much more favorable is the prognosis than when the exudation is membranous and clings with death-like tenacity to the surrounding parts?

The treatment of this symptom is but the treatment of the disease, the main factor being in lessening the hyperæmic condition of the mucous membrane. All remedies for cough originating from this region are given to act locally, whether administered internally to be eliminated through the respiratory tract, or applied directly by means of inhalation—a method much the surer. I will not stop to mention all the remedies which have been brought forward as specifics for cough due to this pathological state, but will only allude to those which have proven of most value in my hands. I

dislike, always, to administer any form of opium if it can possibly be avoided, and for this reason, I use an inhalation treatment almost entirely. Dr. Bishop, of Chicago, a few months ago, advocated the use of a spray of menthol-camphor for various laryngeal troubles, and since that time I have used the remedy with marked success in laryngeal and tracheal coughs.

While Dr. Bishop called attention to the mixture of camphor-menthol, Dr. Hobbs, of Atlanta, was the first to bring prominently before the profession the use of both camphor and menthol in the treatment of nasal diseases.

Triturate together equal parts of camphor and menthol, forming a deliquescent mass, and of the mixture make a 1 to 4 per cent. solution in albolene, and, with a suitable spray producer, allow the patient to inhale it three or four times daily. Another remedy I have used with success, is a mixture of terebene in oil, vaseline, (one drachm to two ounces), inhaled in the same way as the first. In a cough accompanying a severe laryngitis, the compound tincture of benzoin, given by hot steam inhalation, as recommended by Lennox Browne, of London, is a most valuable remedy.

(*c*) *Pharynx.* In acute follicular pharyngitis, cough of a hemming character is sometimes present due to the unusually irritative character of the follicles as the current of air strikes its surface. The treatment consists in the thorough destruction of the follicles, best done with the galvano-cautery point, followed with astringent applications of nitrate of silver.

2. *Functional,* or such as are dependent upon pathological states or deranged functions, more or less chronic.

(*a*) *Nasal.* All physicians who have ever worked to any extent in the nasal cavities, know how frequently cough is excited when the mucous membrane covering the turbinates is touched with a probe. I have a little patient upon whom a violent fit of coughing is produced whenever a spray is

used in the anterior nasal fossæ. This, of course, is reflex irritation but for a moment and ceases when the probe or spray is removed, but what we see here as a momentary cause, becomes a continuous one in enlarged turbinates or septum spurs. Dr. Beverly Robinson, of New York, speaks of coughs of this character as due to posterior hypertrophies of the inferior turbinate, producing pressure and irritation by contact with the septum. Some rhinologists have found areas in the nose more sensitive than others. Dr. John McKenzie, of Baltimore, found the posterior portions of the inferior turbinates the most irritable area, while Mr. Lennox Browne, quoting Hack, found it in the anterior portion. Nasal neuroses, dependent upon abnormalities in the nasal cavities, have, of late, taken a prominent place as causal factors in producing many symptoms before unknown. That such abnormalities play an important role, no one can deny who has seen such benefits accrue to patients relieved of these morbid conditions. Deviated septums, spurs, enlarged or hypertrophied turbinates, polypi, etc., can all, by reflex irritation, be a cause of cough, hence it behooves a physician to examine thoroughly into the nasal cavities when no discoverable lesion can be found elsewhere as a causal factor in the production of this symptom. To go into the methods of treatment of the different forms of nasal diseases that cause cough would make a lengthy article of itself; suffice it to say, that every source of possible irritation should be found and removed. Hypertrophies are best removed with the galvano-cautery, and polypi should be thoroughly extirpated with the wire ecraseur. All septum deviations and spurs, when prominent enough to be a source of irritation, should be removed by whatever method the operator chooses.

(*b*) *Naso-pharynx.* Adenoids, besides an obstacle to free nasal breathing, are sometimes an active source of cough, as is also an enlarged third or pharyngeal tonsil. The

pharyngeal tonsil is a collection of lymphoid tissue, usually in the median line of the vault of the pharynx, and, while often overlooked, it is frequently the source of a post nasal catarrh and a causal factor in the production of the symptom in question. If such a patient be examined with a post rhinal mirror, this globular, red, protruding mass will be seen in the vault, and in the majority of cases coated with a ropy, mucous secretion. The only permanent cure for this condition is the complete extirpation of the offending masses, best done with some post nasal forceps. Adenoids should always be removed as soon as possible, that the attendant train of symptoms may be eradicated.

(*c*) *Pharynx.* An *elongated uvula* is another source of cough and must not be overlooked, its character being of a hacking nature, without expectoration. I dislike to mention the uvula as a causal factor, from the fact of its abuse and the rough treatment it has received at the hands of many physicians. How often has a poor, innocent little uvula, of, perhaps, a little increased length, been clipped when no other cause for a cough could be found, and the patient thus be made to suffer for the ignorance of the operator? I have seen several cases where too much of the uvula was excised, and thereafter the patient made to suffer the inconvenience of an incomplete closure of the post nasal space in deglutition. One must observe whether the uvula is relaxed or falls with ease upon the base of the tongue, before looking upon it as a source of irritation. Cough due to this cause is most troublesome at night, when the patient is lying down, and the organ falls against the pharynx. The treatment consists in the reduction of the size of the organ, either by medicaments or excision of a portion. Astringents should always first be tried, and these failing, provided the length of time warrants it, excision can be performed, usually with success. One unaccustomed to the performance of the operation, will invariably excise

too much and leave the patient in a more uncomfortable state than the one previous. A large portion of the uvula being muscular, it has a tendency to retract, so that its muscular portion should not be cut. In the majority of elongated uvulæ, one will always see between the mucous membrane and the muscle, a distinct line of demarkation, and it is here that the line of clipping should be made. Long forceps and scissors are all that is required. Do not cut off too much, is my injunction, if you do not want the unsavory benediction of your patients.

Hypertrophied Faucial Tonsils. While not frequent, the above condition is sometimes the cause of a persistent cough, especially in children. Dr. Beverly Robinson, of New York, makes mention of the fact; and Lennox Browne, in speaking of a neurotic cough, believes that there is always an objective cause. He says the commonest of these is the irritation of enlarged tonsils, and cites two cases where the removal of these organs was followed by the cessation of that symptom. He further says, "Recent experience leads me, even where the tonsils are not enlarged, to suspect adenoid growths in all cases of reflex spasmodic cough. Adenoids and enlarged tonsils so commonly exist together that a thorough inspection for both is always demanded." Beverly Robinson says, "Hypertrophy of this structure (tonsils and adenoids) gives rise to congestion of the lower nasopharynx, and this increases the sensory excitability." The treatment of this condition is the removal of the enlarged tonsils, by whatever method the operator chooses. McKenzie's tonsillatome is a favorite instrument with many, and has proven very satisfactory in my hands. The means resorted to matters not, just so they are removed.

Enlarged Lingual Tonsil. The name, tonsil, in this connection is misleading, for the morbid condition rather signifies a collection of lymphoid tissue, lobulated in appearance, at the base of the tongue, especially at the side. This

lymphoid glandular tissue is sometimes the cause of a harrassing, rasping cough, especially in singers or public speakers, among whom this condition is most prone to exist. So common is it among this class of people, that I immediately look for it when singers consult for treatment. Numerous mention has been made of this condition in the recent literature upon the subject. A. Ruault, in the Archives de Laryngology, as late as June, 1888, speaks of it, as does also Dr. J. W. Gleitsman in the New York *Medical Record* for December, 1887. Associated with the cough is a feeling of constriction in the throat, and the sensation as if a foreign body were present, whenever the act of deglutition is performed. The treatment consists in its removal. If lobulated and large, it can be removed with the wire ecraseur; otherwise, the occasional application of the galvanocautery will be found more serviceable.

(*d*) *Laryngeal.* Under this head must be mentioned the growths, whether external or internal, benign or malignant, which by their presence irritate some filaments of the superior laryngeal nerve and cause cough. Removal of such growths will prove the only satisfactory treatment. The accumulation of a dirty purulent secretion in the larynx, attendant upon an existing atrophic rhinitis, is frequently a source of irritation and productive of a cough, which is only removed by the cure of the nasal disease.

(*e*) *Aural.* Cough, from irritation of the auricular branch of the pneumogastric, is an occasional, though infrequent occurrence. Many cases have been reported where the removal of impacted cerumen, foreign bodies, etc., from the external auditory canal has relieved a cough of long standing. Such a case I saw a few weeks ago in that of a medical student, who had exhausted all the known remedies for his cough, only to experience relief when a large mass of impacted cerumen was removed. In the last edition of Dr. Roosa's work on the Ear, he devotes a special

paragraph to the consideration of this subject, under the heading of "Ear Cough," and quotes numerous authorities who hold the same view. The treatment consists in the thorough removal of all abnormal substances in the external auditory canal, especially if they be pressing upon the membrana tympani.

(*f*) *Gastric, Hepatic, Reproductive.* (*f*) Gastric neuroses manifested by reflex irritation in other portions of the body are no infrequent occurrences, especially in the work of the general practitioner. The anatomical relationship to the great solar plexus of nerves, makes the stomach a centre from which many nerve impulses originate, and which may thus prove a centre for many reflex phenomena. The three great vital centres, the brain, heart, lungs, are greatly influenced by its morbid condition or any functional derangement of the same. A "stomach cough" is no infrequent occurrence with children. Flatulency, distension, loss of tonicity, are some of the frequent concomitant symptoms. Young children, from under the watchful care of their mother, frequently overload their stomachs with cakes, candies, fruits, etc., the result of which, manifesting itself at bed-time by an incessant cough, is quickly relieved by an efficient emetic or a good dose of oil. Indigestion plays no small part as a causative factor in this symptom, and, hence, a well regulated digestive apparatus is a matter of necessity as well as comfort.

(*g*) *Hepatic.* Organic rather than functional derangements of the liver, are more apt to act as excitants of a cough. Alcoholic subjects especially, are more prone to suffer with this symptom, whether they be suffering with a hypertrophic or atrophic cirrhosis of this organ. A case recently under my charge, affords a typical example of the condition in question.

A German, male, age 45, was referred to me by his family physician on account of an incessant cough of the

most explosive nature, which had yielded to no course of treatment. The patient gave a good family history, and, to all appearances, his present physical condition, save the cough, was excellent. By the habit acquired in his fatherland, he was an excessive beer drinker with an occasional interspersion of more spirituous liquors. His pharynx was very sensitive to the least manipulation, and vomiting would be produced at the slightest provocation. By degrees a thorough examination was reached. The nasal cavities showed nothing as a causal factor, and the pharynx, save the anæmic, soggy condition of the mucous membrane throughout the oral cavity, which one usually finds in chronic alcoholics, presented nothing abnormal. The retching would cause the epiglottis to appear unusually large, but when quiet was restored to the parts, no pathological changes could be seen within the larynx. I then turned my attention to the stomach and liver. I found him suffering with a condition of chronic gastritis and by palpation and percussion, the liver was found to be much enlarged and hardened, with slight tenderness. Whenever firm pressure was made over the hepatic region, a paroxysm of coughing was immediately started. The morbid condition had so far progressed that no remedies succeeded in staying the pathological process. I doubt not but that many of you have often seen a nervous, hacking cough, dependent upon an engorgement and torpidity of the liver quickly relieved by some hepatic stimulant or mild cathartic. In malarious districts this condition is frequently an exciting factor, and a thorough regimen of treatment must be instituted before the symptoms will abate.

Before closing, I must mention a cough which is sometimes present about the age of puberty, seemingly dependent upon the condition of the reproductive organs or that of the blood. In the *Lancet* of December, 1890, Sir Andrew Clarke had an article entitled, "Remarks on the

Barking Cough of Puberty," and cites several cases of this condition, occurring in his practice both in boys and girls. Dr. Leaming, of New York, who has since called attention to this subject, has reported such a condition occurring in a young girl suffering with chlorosis, following an attack of mountain fever. The late Sir Morrell McKenzie has also reported such a case. That there is a close relationship between certain conditions of the reproductive organs and certain nervous phenomena in other portions of the body, no one, I am sure, will deny, for day by day, the correlation of our bodily functions is growing in importance. Dr. John McKenzie, of Baltimore, has called attention to certain nasal conditions coexisting with a peculiar state of the reproductive organs which, from their constancy, do not seem to be entirely fortuitous. In all such cases, the treatment must be general, the aim of the physician being to restore the body to as normal condition as possible by rectifying all morbid states in individual organs.

In speaking of the various causes of cough, I have made no mention of that disease of childhood known as whooping cough, since my aim has been to consider only those pathological conditions demonstrable on ocular inspection as irritating factors in the production of this symptom. Whooping cough is a germ disease, as is the almost universal consensus of opinion, and like all others of its class, the specifics for its cure are legion.

My task is over, but if I shall incite you to a closer discrimination of the various causes of this every-day symptom, and not to treat all coughs indiscriminately by certain "stock prescriptions," my aim will have been fully satisfied and your patients likewise blessed.

DISCUSSION ON DR. ROY'S PAPER.

Dr. P. R. Cortelyou: I think Dr. Roy has put the subject plainly and very clearly before us. The first thing to do in treating cough is to find out the cause, and not treat every case indiscriminately. I know in my own experience that certain things produce cough in one person and not in another. I have found the use of the various remedies which he emphasizes very beneficial. I use camphor and menthol, combined with albolene, as a spray for nasal and laryngeal irritation, and have found them extremely beneficial. In one case the patient had a tubercular cavity in this position (illustrating) and after emptying the cavity at night before sleeping, he could get several hours rest before the cavity filled up again. I should avoid giving opiates as much as possible in all cases of cough. The preparation of codeia is one of the best we can give. Codeia, combined with chloroform and dilute hydrobromic acid and syrup of wild cherry, has proved one of the most beneficial remedies for irritative cough that I have used.

I consider the rapid progress and improvement which has been made during the last half dozen years, in the branch of surgery treated of in Dr. Roy's paper, renders it the brightest chapter in medicine or surgery.

Dr. R. O. Cotter: He has shown how the numerous reflexes are imparted from one organ to another by obstruction of the nasal passages. I have been working on this line myself for quite a while. I read a paper at Brunswick two years ago, on a similar subject, which was sharply criticized, and in which I advocated the removal of offending nasal hypertrophies, etc. We must keep the nasal passages and naso-pharynx clear, and it is necessary to relieve the hypertrophied condition of the turbinated bones in the manner described by the speaker. I highly indorse the paper.

Dr. Mark H. O'Daniel: I want to call attention to an

old remedy, that is the use of quinine in whooping cough. Dr. Seibert, while I was in New York last fall, said that after trying all the list of remedies for whooping cough, he had gone back to the old remedy of quinine; that of all the remedies he had used, quinine gave him better satisfaction and better results. His manner of administering it was in one large single dose, always given in the afternoon about three or four o'clock. For instance, five grains given to a child, three or four years of age, in the afternoon would control the paroxysm. I came back and tried that in Macon, but in addition I used an old prescription of Keating's, called here "Johnson's Whooping Cough Syrup," which is composed of extract of belladonna, alum, morphine, tolu and acacia. I give a large single dose in the afternoon, according to Seibert, where the child's stomach will tolerate it, together with the cough syrup and it always has a very happy effect. Of all the remedies I have used, it certainly has acted better than anything else in my hands, given in this way. Quinine is an old remedy, but given in that particular way, it has a very beneficial effect.

Dr. W. B. Hardman: Professor Thompson, in a paper on "Cough and Its Treatment," read in the Academy of Medicine in New York City, recommended an emulsion of acacia with moderate doses of hydrocyanic acid and linseed oil. The taste is disguised by the oil of wintergreen. He uses this emulsion in cases of chronic bronchitis where there are lumps of mucous in the bronchial tubes which create irritation and cause excessive coughing. I have tried the combination in a great many cases of cough, especially after their recovery from acute diseases, and it gives them great relief. A similar emulsion is on exhibition at the Rankin Hotel. I have never tried it, and do not know anything about it.

Dr. T. L. Lallerstedt: Dr. Roy speaks of bronchitis. I am subject to that disease, and have been for some time. Like all other doctors, I treat myself. I claim that bron-

chitis in the acute stage is nothing but too much sweating from the lungs, and I treat myself and the patients that come into my hands on this principle. I have one-fourth of a grain of morphine, six drops of belladonna (tincture), six drops of the fluid extract of gelsemium, and six grains of quinine. Mix and divide in six equal parts, and put in six capsules; give a capsule from one to six hours, according to the cough and expectoration. This dries up the sweating, and then you get rid of the cough. When I arrived in this town on Tuesday, I was seized with bronchitis, and was obliged to go to bed. I was getting worse until a gentleman went to a drug store and procured the remedy I have mentioned. I have been using it ever since I got here. That is the plan I pursue, and I think if the members here will do the same thing, they will benefit both their patients and themselves if troubled in this way.

GUN-SHOT WOUND OF THE STOMACH—REPORT OF A CASE.

BY A. A. SMITH, M. D., HAWKINSVILLE, GA.

Through the courtesy of Dr. A. W. Peurifoy, who was the attending physician, I am permitted to make a report of this case. On 28th of February last, Dr. Peurifoy was called to see a negro who, in a difficulty with another negro, had received a pistol shot, said to be in the stomach.

On arriving, and after making an examination, the doctor found that in the fight, which had occurred two hours previous, his patient, a boy eighteen years of age, had received a wound directly over the stomach. A casual examination with the eye alone was all that was necessary to show that the ball had penetrated the cavity of that organ. Not being satisfied, however, he made a careful and cautious examination with the probe, and found that the ball had entered at a point about two inches below and to the left of the tip of the ensiform cartilage of the sternum. The probe passed readily into the cavity of the stomach, and the doctor, supposing that the ball had passed through and lodged in some other portion of the body, did not pursue the examination further. When first seen, morphine was administered hypodermically to relieve pain, which was severe at the time; also, instructions were given to use cold applications to the wound, together with such other general instructions as was thought best. On the following day the doctor returned, expecting to find a well developed case of traumatic gastritis, with peritonitis. In this, however, he was mistaken, as the pulse was 80 and temperature normal, and no indications of any inflammatory process whatever. At this visit the cold applications to the wound, with morphine to relieve pain should

there be any, was continued; also instructions were given that in the event the bowels should not act, two cathartic pills be given. On the third visit, which was about forty-eight hours after the boy had received the shot, he ascertained that there had been two or more free evacuations from the bowels, and, to his great surprise, that the ball had passed with one of those evacuations.

Mr. Anderson, on whose place the difficulty occurred, and for whom the negroes were working at the time, was immediately called by the mother of the boy and shown the ball. The wound healed by first intention, and just one week from date of the injury the boy returned to his work, which was that of laboring in a saw-mill. This is an unusual case, and can be accounted for only on the theory that the ball was spent when it entered the cavity of the stomach, and dropping became mixed with the food and passed out as other foreign bodies, such as coppers, nickels, buttons, etc., which enter the stomach by the mouth. Another fact to be noted in connection with this case, is in reference to the particular point where the ball entered, which, as already stated, was below and to the left of the ensiform cartilage of the sternum. This would indicate that it penetrated at or near the cardiac orifice, and there being none of the contents of the organ in contact with the walls at this particular point, did not allow any escape of food, which, had there been any, would have been attended with fatal results. There were no special features in the management of this case; in fact, there could be nothing done except to relieve pain and await developments.

I omitted to state in the beginning of this report that the pistol used was what is known as the old style Smith & Wesson revolver, 32 calibre, and the distance the parties occupied was about ten paces apart, also that I have the

bullet with me which I will take pleasure in showing, should any gentleman desire to see it.

DISCUSSION ON DR. SMITH'S PAPER.

Dr. J. W. Duncan: The case reported by Dr. Smith brings to my mind one that I saw a number of years ago in Tennessee. One night I had been to church, and just after leaving church I heard some ladies' voices as if in great distress. I hurried to the place, and found that a man had been shot apparently directly in the epigastric region. There was considerable shock, pain, and the patient was perspiring freely, and of course thought he was going to die very soon. On careful examination I found the ball near the spine under the skin. The man had no bad symptoms except a severe shock, which lasted only a short time. He lay in bed several days, but made a good recovery. The ball entered below the ensiform cartilage in the epigastric region. How it could strike the rib and keep on the outside and get around where I found it, I do not know; but as I have said before, the man made a good recovery without developing serious symptoms.

Dr. Willis F. Westmoreland: I have seen one case of this kind. The man was shot with a 32 calibre pistol. The two men were sitting around the fireside, and one attempted to draw a pistol within a foot of the other and it went off accidentally. We could easily see the wound of entrance of the bullet, but it could not be found. The shock and other symptoms did not amount to anything. There was simply a scar. The patient made a good recovery. He was shot in the region of the stomach and directly over it.

In another case of the same kind, a demonstration was made as to what became of the bullet. It could not be found, and yet the man was carrying around a bullet as large as one's thumb. Some six or seven physicians saw the case,

and one or two supposed that the bullet had dropped somewhere. Shock was profound. When they were admitted into the boarding house, where the man lived, they found that he had already prepared his will and had had a minister, shortly after which the bullet dropped out of his pants.

In a great many cases, unless we probe thoroughly, we cannot tell where the bullet goes. In some cases we cannot tell more by the use of a probe than any other way. The old army surgeons use any kind of soft probe in probing for bullets. We are apt to be mistaken as to what becomes of the bullet. The physical condition of the patient is that upon which you have got to rely. Like, in the doctor's case, we cannot tell by probing what has become of the ball, and for that reason it does not do any good to probe in many instances.

Dr. W. E. B. Davis: The doctor has certainly given us the report of a very interesting case. I can understand how a bullet could enter the abdomen as he has described and not produce death. It should be borne in mind, however, that the statements from a patient of this kind should always be accepted with a great deal of reserve. Especially do we have to do this where there has been a fight, and where the party, who has been injured, is anxious to have his antagonist convicted of a severe attack. We have frequent instances where the man injured wanted to convict the fellow who shot him, and to do so had secured a bullet and substituted it for the one used. This case, however, seems to be well authenticated, and doubtless the bullet entered the stomach and passed off as has been described.

Dr. T. L. Lallerstedt: I will relate a case of gun-shot wound that came under my observation, not of the stomach or bowel, but it is fully as interesting. Several years ago a crowd of gentlemen in the community in which I live had gathered together for the purpose of having a Christmas hunt. They had the hounds and everything ready to start.

One of them, in getting over a fence, caught the hammer of the gun in the fence and shot a gentleman right in the neck. Some of the shot came out, and there was a terrible opening made in the neck. I was sent for, but as I was attending a lady in confinement at the time, I was unable to go, but sent a brother practitioner by the name of Harris. As soon as I left my patient I went over expecting to find the gentleman dead. He was not dead, nor is he dead to-day. A great many shot came out through his mouth, and many spiculæ of bone came out of the mouth also. The last time I visited him while he was under my care, he had some eighteen of the shot that had come out of his mouth, and had also some twelve or fifteen spiculæ of bone. I felt portions of the bones myself in his throat as he complained of a little pain.

Dr. J. H. Heard: In regard to probing for bullets, I find it very unsatisfactory in wounds of any portion of the body, as the probe is so apt to go between muscular layers, or between the facia and muscles. One reason why the probe will not follow the course of the ball, is the part is usually in a different position from what it was when it received the wound. I have several times attempted to trace a ball when I knew its exact location, but with all my manipulation, I failed to make the probe follow the course of the ball.

I had a case ot wound of the stomach with a ball from a 32-calibre pistol. The ball entered the body at the inner border of the right hypochondriac region, going into the pyloric end of the stomach. The case was that of a negro woman. She was standing in a doorway, her assailant being on the ground, five or six feet beneath, and not more that ten feet from her. I saw her in about fifteen hours after she was shot, and found her in a state of collapse. She was vomiting blood, and I was informed that she had been vomiting blood for some hours. Now, it was abso-

lutely certain that the ball had entered the stomach. In order to fortify myself for the courts, and for my own satisfaction, I attempted to introduce the probe, but failed to trace the ball into the stomach. If the case had not been a hopeless one, I would not have probed at all, and from my experience in probing for balls I have concluded that in most cases it is entirely unnecessary.

SOME PRACTICAL POINTS IN REGARD TO EYE-STRAIN.

BY R. O. COTTER, M. D., MACON, GA.

My reason, I will not say apology, for calling your attention to this rather hackneyed subject, is, because in my daily work as an oculist, I am being constantly impressed with the observation that the vast majority of general practitioners overlook the easily substantiated fact that such a great multitude of morbid reflex neuroses are brought about by eye-strain. That is to say, incorrected errors of refraction. I refer especially to hyperopia and hyperopic astigmatism. As to myopia (near-sightedness) I have little to say of it, as it is rarely accompanied by headaches and eye-strain. Myopes generally complain of not being able to see well enough at a distance.

Headache is by far the most common accompaniment of hyperopia and astigmatism. These headaches are most common in the temples, frontal region and vertex. They frequently appear to be what are known as sick or bilious headaches, and are in any case truly distressing in character. Among the other symptoms are a congested or inflamed conjunctiva, blephoritis, styes, chalazia, frequently an annoying and uncontrollable twitching of the eyelids, aching of the eyeballs, etc.

There is no sort of doubt, also, that chorea is often developed in children as a result of this same cause. There is also no doubt that in persons of neurotic temperament, indigestion, nervous dyspepsia, insomnia, and more or less complete physical prostration, is brought on simply from uncorrected eye-strain. There are plenty of these cases on record.

I verily believe that there are very many hopeless opium

habitues and inmates of insane asylums, whose unbearable sufferings from this very cause was the cause of their first step in their downward career. The incredulous general practitioner, who has not yet become impressed with the truth in this matter, will smile at what he not unnatually believes is the vagaries of the hobby-riding oculist. Gentlemen, while I know that, unfortunately, there are riders of hobbies among oculists, as there are in all specialties, let me remind you that this thing of demonstrating and correcting ametropia comes a little nearer being an exact science than any other branch of our profession. As for my own work in this line, I think it has been conscientious and painstaking. My books are open to you at any time; my patients are accessible to many of you throughout this section. They, and the results accomplished, can speak for themselves. I will try and illustrate by reciting two or three cases.

Case 1. Mrs. ——, a married lady, aged 27 years. Of neurotic temperament. Has no organic disease. Has, for several years, been an almost constant sufferer from the most horrible headaches. Any attempt to read or sew would result in her having to go to bed with a sick headache. Even when she went out shopping it meant a terrible headache for her. The poor woman had, fortunately, successfully fought against taking opium, but she afterwards told me that she had almost concluded to ease her torture by resorting to morphine.

She had unmistakably injured her system by taking great quantities of antipyrine, phenacetine, etc., and this was largely by physicians' directions. She had become wasted and yellow, and was fast losing all hope of relief. Her very life was becoming rapidly blighted.

Now, strange to say, of the six reputable physicians who had treated her for her headaches, etc., five of them were men who would have promptly referred a case of granulated

lids, iritis, or any other *manifest* eye trouble, to an oculist for special treatment, but only one of those six, and she a woman physician just out of college, seemed to suspect the real origin and cause of this patient's trouble. She sent her to me, the patient protesting all the time that "she had no faith in an eye doctor curing her headaches, because she had no eye-trouble, could see well enough, she thought, and her eyes were not at all inflamed." I found that her vision was right eye $\frac{20}{70}$, and left eye $\frac{20}{40}$ of normal acuity. With a 4 gr. to the ℥ solution of atropia, dropped into her eyes night and morning, I found right eye $\frac{20}{200}$, left eye $\frac{20}{70}$. From the very hour, by the way, in which I dilated her pupils and overcame the cilary muscles she got relief from her headache, (so long as the accommodative paralysis lasted), and she informed me next morning that she had, for the first time in months, enjoyed a night's rest free of headache.

By way of digression, let me say: It is a very good rule, when you encounter severe and intractable headaches in young persons, (say persons under 40), to drop a few drops of a 4 gr. to the ℥ solution of atropine in their eyes, and very generally (not invariably, however), if their headache is relieved you can pretty safely put it down as a case of refractive error.

To return to my patient, I found the following remarkable condition of mixed astigmatism:

R eye + 50-1 D eye axis 90 ⌒—eye 1 D ax. 180.

L eye + 1 D eye axis 90 ⌒—eye 50 ax. 50.

Have any of you oculists ever encountered a more diabolical error of refraction? I prescribed these glasses, and knowing that she would soon become disgusted with the attempt to use them with undilated pupils, I began her on them with dilated pupils and predicted confidently that they would give her great relief, though I candidly told her that it would require considerable time to get her over her

headache habit, for there undoubtedly is a headache *habit*, so to speak, a condition of periodical or constant headache that does become habitual. For several weeks thereafter, when she would become discouraged in the attempt to use her glasses, I would dilate her pupils. It required all my tact to keep her using them, but now, after many months have elapsed, I can truthfully say that the correction of this lady's refractive error has made life a very different sort of existence to her, and has changed her suffering condition to one of happiness and joy. She is free of her terrible headaches, and has gained flesh and strength. Nothing else was done for her but the correction of her eye trouble. She finds most comfort in the constant use of her glasses, and her vision with them now is R and L $\frac{20}{20}$.

While such a peculiar astigmatism as her's is very rare, I could recite very many cases even of very slight degrees of astigmatism and hyperopia who suffer with the most terrible headaches in consequence, and very many of these patients have normal vision. I, myself, have more than normal acuteness of vision, it frequently being as good as $\frac{20}{12}$, and yet I have an astigmatism of + 75 D ax. 90, and a hyperopia of + 75 D. If it were reduced to a question of simple comfort, I would prefer to give up my shoes or hat rather than my glasses. I said that we do not usually find eye-strain in persons over 45, for the reason that nature has brought on a change or loss of function in the ciliary muscle, consequently they can no longer over-exert it. Yet, sometimes we do find cases where there is eye-strain or asthenopia.

Case 2. Mrs. ——, aged 50, of Boston, had been fitted with the glasses ordinarily proper for the presbyopia usual to one of her age, yet she had for many years had great trouble upon any attempt to read or sew. She suffered severely with eye-aches, styes, inflamed lids, etc. While spending the winter in this State, she was advised by some

of my patrons to consult me. As I could find no other ocular trouble, I made a careful test of her refraction. At her age, of course I did not use a mydriatic. Her vision was $\frac{20}{20}$. I found that her Boston oculist, who was a man of reputation, had overlooked or failed to correct her one-quarter of a dioptry of hyperopic astigmatism, which my test plainly showed that she had. So I prescribed glasses + 2 D ⌒ + eye 25 ax. 90 for close use, and soon had the happiest results follow their use. She rapidly recovered from her eye-aches and inflamed lids, and now uses her eyes as much as she chooses. Bear in mind that this lady had the slightest degree of astigmatism that we ever encounter. I have no doubt that we all, in prescribing glasses for presbyopia, occasionally commit the same inadvertence which this lady's former oculist did.

Case 3 was a boy 7 years old. He had been growing cross-eyed for nearly a year, but as it was of the alternating variety, and not firmly established in either eye, his parents really consulted me about a certain nervous twitching of his limbs, neck, etc., (chorea), more than for his eye trouble. His vision was below normal, but they had not known it before. When I proposed to undertake to correct his trouble by the use of glasses, they objected very vigorously to his using them, unless I could make the ridiculous, but very frequently desired, promise that their son would soon be able to leave off the use of glasses. They were willing, though, that I should make an operation on his eyes for the strabismus, which, by the way, was now about $2\frac{1}{2}$ lines. Of course I refused to touch the case at all under these circumstances. I think they brought the boy to me a half dozen times during the year asking me to operate on him. Finally, seeing I was bound to have my way in the matter, they consented to an examination of the boy's refraction. His vision was R $\frac{20}{40}$, L $\frac{20}{50}$. Under atropine R $\frac{10}{200}$, L $\frac{10}{200}$ with + 6 D R and L vis. was $\frac{20}{20}$ (normal.) I pre-

scribed this full correction, and by keeping his pupils under atropine for two or three weeks, he experienced no trouble in wearing his glasses. His strabismus and chorea disappeared at once, and has not returned after two years. The boy has been at school ever since.

I never cut a muscle when I can do what is necessary without it. This is what I consider conservative ophthalmology. Of course when the squint has become firmly established we have (usually) to operate as well as correct the refractive error.

My observation is that, even in children, where the error is as much or more than + 3 D it is best to try to make them wear a fully correcting glass constantly. Where the error in young persons is less than 2 D, I wish to state that I do not now so frequently prescribe a fully correcting glass for close use as I formerly did. I shall not weary you with detailing accounts of cases showing the very long train of morbid nervous conditions brought about by uncorrected refractive errors. All these have been clearly proven to exist by faithful and painstaking workers in ophthalmology.

As for myself, I assure you that I do not prescribe glasses for every case of small refractive error which I find. Many of these require general, systematic treatment and toning up, and I send them back to their family physician. Many others of them simply need a rest, or to stop abusing their eyes, and, as I well know, if they were given glasses they would simply continue to overtax their eyes. For these cases I generally refuse to prescribe glasses. I have good reason to suspect that there has of late been too much hobby-riding by some (especially some of the younger) men engaged in eye surgery in the work of useless muscle cutting for heterophoria. My observation of several years convinces me that eye-strain is not so much caused by a lack of equilibrium of the external muscles of the eyeball

(heterophoria.) Neither do my patients require anything like the amount of prisms which some eye specialists employ in their practice. I am thoroughly convinced that the very great majority of cases of eye-strain which I see, are caused from ciliary nervous strain, which is of course due, in the cases I speak of, to ametropia. I have very frequently found persons wearing prisms who were unrelieved thereby, and upon my searching very carefully, could find no occasion whatever for them, and have relieved many of them by leaving off the prism and correcting their refractive error. I am always willing and ready to compare results with these muscle cutting and prism enthusiasts.

A word about mydriatics in refractive work. I have tested the comparative merits of atropine and homatropine most thoroughly, and while admitting the discomfort and inconvenience caused the patient by atropine, yet I must say that homatropine is so very frequently unreliable that I very often have to, in cases where it fails to cause accommodative paralysis, resort to atropine. In young persons under 30, I always use atropine if possible. Of all forms of homatropine which I have used, I consider the gelatine disks devised by Dr. Casey A. Wood, of Chicago, by far the best.

As to the practice of attempting to correct these refractive errors simply with the ophthalmoscope without a mydriatic, I had as soon argue with a man who preaches against the value of vaccination as a man who asserts that refractive work can be done properly in any such haphazard manner.

This thing of correcting refractive errors, gentlemen, is the most prominent, and by far the most scientific part of an oculist's work, and I assure you that too many of you general practitioners overlook many of these cases, and if you only knew it, you meet with one hundred of these sufferers where you see one case of cataract.

PRELIMINARY OBSERVATIONS ON THE BEHAVIOR OF IODINE IN THE PRESENCE OF CAMPHOR, MENTHOL, THYMOL, ETC.

BY R. J. NUNN, M. D., SAVANNAH, GA.

At the last meeting of this Association, a specimen of a combination of camphor and iodine which I have had in use for some years, and which has served me a good part in many instances, was laid before it. Conscious that those remarks produced upon the professional ear about as much effect as does the pattering rainfall upon the heaving ocean, I have thought it might be profitable, if not interesting, to the members, to bring the subject before the Association in a more extended, but still very crude form.

ALCOHOL.

An inspection of the "Table of Solubility of Chemicals" (*Pharmacopœia of the United States, p. 428, edition 1882*), shows the solubility of iodine as being iodine 1 part in alcohol 11 parts.

Now, take a saturated alcoholic solution of iodine; add to it as much camphor as it will dissolve, and its solvent capacity for iodine is immensely increased. In fact, it will be found that of a saturated solution of camphor in alcohol, 125 minims will dissolve 50 grs. of iodine.

CARBOLIC ACID.

If in the foregoing experiment carbolic acid be substituted for the alcohol, the reactions will be found to be very similar, thus:

Experiment 2. Liquefy a quantity of carbolic acid with a little alcohol (about 1 per cent.), saturate the liquefied carbolic acid with iodine; next saturate this iodo-phenic

solution with camphor of which it will dissolve 300 per cent. to 400 per cent.; this camphorated-iodo-phenol will now dissolve or appropriate iodine until it becomes a dense, syrupy liquid, or,

Experiment 3. Prepare a saturated solution of camphor in carbolic acid. (This formula, which is original, and has been used by me for many years, is possessed of valuable medicinal properties, and is known locally as pheno-camphique.) The result of the saturation of this solution with iodine will be similar to that obtained in experiment No. 2.

SALOL.

If camphor and salol are mixed in proper proportions, a liquid results which also has the power of dissolving iodine in large quantity, a blackish liquid resulting.

THYMOL.

Thymol liquefies when mixed with camphor, and the resulting fluid is also a powerful solvent of iodine.

MENTHOL.

A mixture of menthol and camphor also fluidifies, and in this liquid iodine is very soluble.

CHLORAL HYDRATE.

Chloral hydrate when mixed with camphor produces, as is well known, a transparent liquid in which also, iodine dissolves in large proportions.

PETROLEUM.

There are to be found in the market a number of fluid petroleums, water white and odorless, to which fluids, fancy names have been given by the manufacturers or the vendors. Practically these are all the same, being bleached, deodorized petroleums of slightly different densities.

In such a fluid, iodine is very soluble, yielding a violet colored solution, but in the presence of camphor it is miscible in all proportions, the solution changing in color to a blackish hue.

CHLOROFORM.

As is well known, iodine is soluble in chloroform, giving a solution having a violet tint, but by the addition of camphor, solutions of any strength may be made; but these are changed from the violet color to the black shade which is characteristic of the camphor compound.

TURPENTINE.

Caution will be required in mixing turpentine and iodine on account of the violence of the reaction, but with proper precautions, this mixture of camphor, iodine and turpentine can be effected, and a solution made of any desired strength.

GLYCERINE.

When rubbed up with the dry preparation of iodine and camphor, glycerine will dissolve a certain proportion of it, and glycerine is miscible in any proportion with the liquid preparations so far tried.

WATER.

By the careful addition of water to a glycerine preparation of iodo-camphor, a watery solution is obtained containing a notable quantity of iodine.

It will be observed that in all the solvents mentioned, some differing from others in their chemical relations to a very wide extent, the one element common to them all is camphor, and it necessarily follows that the remarkable solubility of the iodine in these various combinations can only be explained by studying the inter-action between iodine and camphor.

If powdered camphor and iodine in proper proportions be triturated together, the resulting reddish powder shows a remarkable tendency to become pasty; in fact, it is on its way to liquefaction, and assumes a blackish color similar to that of a solution of iodine in alcohol or ether.

Camphor and iodine, when heated together, form a black

syrupy liquid, which upon cooling, becomes a tough black mass.

Very similar is the behavior of menthol and iodine under like circumstances.

Thymol and iodine, however, upon cooling, form very regular crystaline masses.

PHARMACOLOGY.

The applications of the combination under consideration to the purposes of the pharmacist are of necessity very various, soluble to a greater or less extent in every fluid which he employs; it can be so dispensed of different degrees of concentration for internal as well as external use, or it can be made into ointments and plasters, or even into a powder by mixing it with some suitable inert material, as talc or kaolin; but, of course, the utility of these preparations must depend upon the therapeutic value of the combinations themselves.

It is chiefly as topical applications I have employed these iodine compounds, and here I have found them of great value, exhibiting all the effects of iodine, except its causticity, which is always greatly modified and is sometimes apparently entirely absent.

MEDICAMENT.

To the physician, it is believed, that this preparation will prove of special value. Less irritating than iodine, but apparently preserving all its other therapeutic properties, it cannot fail to become a valuable remedy for internal and external use, and the vast limits within which it is applicable, from the spray and wash of the rhinologist and the oculist, to the tent and tampon of the gynæcologist, will in all probability secure for it a welcome from all classes of practitioners.

This combination in one or other of its forms, will be many times an efficient substitute for the more expensive

chemical compounds of iodine, but it will require extensive experience in the use of its many different combinations to determine for each the particular role it can best fill.

These experiments can only be regarded as introductory to a more extended series of observations on the action taking place between iodine and the different essential oils, which, from the crude experiments so far made, would seem to indicate the existence of some very interesting compounds; in some the reaction is very violent, in others it is slow, and the resulting combination often exhibits interesting and unexpected properties, but these, and similar observations which I have made, would lead far beyond the limits assigned to this paper.

I must here acknowledge my indebtedness to that accomplished pharmacist, Mr. R. A. Rowlinski, of this city, for the valuable assistance he has rendered me in these investigations, and for the preparation of the specimens which I have laid before you.

PYELITIS AND PYELO-NEPHRITIS AS A PROBABLE CAUSE OF PUERPERAL ECLAMPSIA AFTER DELIVERY.

BY W. B. HARDMAN, M. D., HARMONY GROVE, GA.

My brother intended to read a paper on this subject, but as he was unable to attend, he asked me to take his notes and my own and prepare the paper in his stead.

We have been stimulated to present this paper because of the number of cases of puerperal eclampsia after delivery which have recently come under our observation. It is pretty generally conceded that eclampsia after delivery is comparatively rare, but if you should take our experience as a standard, it is not a rare occurrence. But, in my opinion, those cases occurring after delivery do not, as a rule, have the same pathology entirely as those occurring before or during labor.

The first case that I shall call your attention to is Mrs. C., aged about 35. I was not present at her confinement, nor had I seen her prior to that time. From reports, she had been in bad health some three or four years previous to this time, but her trouble was referred principally to her stomach. During the last four months of her pregnancy she complained repeatedly of lumbar pains, and pains and tenderness in the region of the right ovary. A good deal of the time she was confined to her bed and had some fever, but still she did not consult a physician. She was delivered on a Sunday evening of twins by a midwife, and from accounts had no serious trouble. She seemed to be doing well enough until the following Wednesday morning before day, when she attracted the attention of her hus-

band, and he found her in the midst of a convulsion. When I arrived she had had three, and was attacked with the fourth as I sat down by her bedside. This lasted her several minutes. During the next twenty-four hours she had three more very severe ones in spite of treatment. In the intervals between the convulsions, she was at times comatose, and at others very restless, throwing herself about and talking in a loud, incoherent way. She repeatedly called her husband in loud and comparatively distinct tones. This was an interesting fact because, for some reason or other, she had not for three years spoken above a whisper. She did not regain consciousness until the following Sunday afternoon, when she again spoke in whispers. Her temperature was high most of the time, ranging from 102° to 105°. Her urine was repeatedly examined and contained no casts, but at all times an abundance of pus. Specific gravity never low. The pus continued abundant for several weeks, and then gradually diminished, but was still perceptible three months after delivery, when I made my last examination.

My second case was a primipara, about eighteen years of age, rather small and of slender build. She looked anæmic but said her pregnancy gave her very little annoyance. There was absolutely no œdema of the feet and legs, or any sign of plethora about her. Her labor was severe, but not very long. I noticed during her last pains that her eyes danced slightly, and had that peculiar look about them which we note just before an eclamptic seizure. I remained about an hour after delivery, and when I left her, she told me she felt "splendidly." She was laughing and talking all during the hour I remained. I was summoned about two hours after I reached home, and when I got to her bedside she had had two convulsions. She had three more in about six hours' time as severe as ever I witnessed. These last three attacks were brought on by some sudden

noise, one by the barking of a dog, another by the crying of the infant, and the third by the falling of a chair. She became perfectly conscious the next morning; said she rested well, made several inquiries as to why I was still there, and of other things about her person and the room, that she did not quite understand, but knew absolutely nothing of what had happened until some one informed her about two months afterwards. Her urine contained no albumen and no pus.

My third case had two convulsions about four hours after delivery. She had poor health during her pregnancy, but I did not see her to examine her. Her urine contained no casts, but a good deal of pus. Specific gravity high.

My fourth and fifth cases were seen by my brother. Both of these had no sign or symptoms of convulsions during delivery. In the first of these the eclamptic seizures appeared about twelve hours after delivery. Her urine contained albumen, pus and casts. Specific gravity high. The pus disappeared first during her recovery, and the albumen continued for several months. She is now a victim of chronic Bright's.

The fifth case was only seen in consultation by him. The attacks came on five days after confinement, and her urine was found to contain an abundance of pus.

Our four cases are still living, but we have not examined their urine recently, and do not know the exact conditions of the kidneys at present.

It would seem from the foregoing cases, that eclampsia after delivery is not very rare, if it occurs as frequently in other physicians' experience as my own. It also occurs to me that the exact etiology and pathology of puerperal eclampsia is still a matter of doubt. We might ask ourselves the question, why should a woman have eclampsia after delivery, anyway? If it is due entirely to the peculiar excitable condition of the nervous system during

pregnancy alone, why do they not always occur during labor when the nervous system is most severely taxed? Or we might ask, what causes this peculiar excitable condition of the nervous system during pregnancy? Again we suggest, why is it that a woman who is lying quietly on some couch is suddenly attacked with eclampsia before labor sets in? There are many questions we might ask here which would prove very troublesome to the advocates of any one theory of the pathology and etiology of this disease. If we assume that the theory of Traube and Rosenstein is correct, viz: that eclampsia is due to the anæmic and hydræmic condition of the blood which is present, perhaps, to a greater or less extent in all pregnant women, we might ask why we do not meet with such convulsions in ordinary anæmia or pernicious anæmia?

After all, in my opinion, we must look to the kidneys for the cause in the majority of cases of puerperal eclampsia, though not to them entirely. There may be a combination of circumstances, such as the excitability of the nervous system, weakness, anæmia, etc., which only help on towards the tendency of the kidneys. While it may not be due entirely to an acute Bright's disease, as Tenichs affirms, yet if we examine closely, in the majority of cases we will find some renal insufficiency. There are many good arguments offered against the views of French. For instance, many patients with acute Bright's disease, during pregnancy, have no symptoms whatever of eclampsia. Neither does every case of acute or chronic Bright's in ordinary practice terminate in uræmic convulsions by any means, because every kidney with Bright's is not necessarily insufficient for its work. This, no doubt, is quite frequently the case in child-bearing women also. Some one may ask what of those cases which occur during or after delivery when there is no indication of kidney trouble as far as one can discern? No doubt a good many such

cases do occur. My second case is a good illustration. But we must not forget that we may have Bright's without finding albumen in the urine. Still it is not improbable that we may have some cases of puerperal eclampsia which are due entirely to an overstrain on the nervous system apart from any toxic material in the blood; as, for instance, the weak, nervous system of a child is unable to bear the attack of many acute diseases and is thrown into convulsions, so a weak woman at this critical period, when suffering much from exhaustion, may be thrown into violent convulsions by some external excitant, as it were, or by reflex action, we say.

But coming back to our first assertion regarding renal insufficiency. In the pregnant woman, there are many things operating to bring this about. The excessive work which is put upon the kidneys during pregnancy; the crowding of the viscera in the abdominal cavity, and the excessive termination of blood in the region of the kidneys, causing congestion; and, lastly, the pressure of the gravid uterus on the ureters, all help to put a strain on these organs, and they may cause enough disturbance to set up disease which may render them insufficient. The last cause we consider the most futile. This is shown because we seldom note any disturbance until the latter months of pregnancy, and also disturbance of the kidneys is now commonly present in twin pregnancies. The pressure on the uterus prevents a free outlet of the urine, and it is blocked up, so to speak, in the pelvis of the kidneys and there may undergo decomposition and cause enough irritation to set up an inflammation. This may soon become a pyelitis or a pyelo-nephritis, as this, no doubt, helps to cause simple nephritis in some instances. This pyelitis and pyelo-nephritis continues until it intrudes upon the pyramids and uriniferous tubules and destroys them to a greater or less extent, and thus limits the secreting power of these organs.

Now, what better source of blood contamination could we ask? We have kidneys incapable of doing their whole duty, and thus causing a retention of matter that should be excreted, and also an organ blocked up with pus and decomposing urine which, with the pressure it causes, only makes matters worse. There is no doubt, also, that there is a re-absorption of toxic matters from this pus and decomposed urine—either urea, carbonate of ammonia or some deliterious substance.

Now, it will be observed from the foregoing cases of eclampsia after delivery, that four out of five cases contained pus in the urine. Just why a case of pyelitis or pyelo-nephritis should bring on eclampsia after delivery and not before or during labor, I am unable to say. These cases may be simply a matter of coincidence. It may be probable that the pyelitis has caused such destruction in the kidneys that after delivery, when the stage of reconstruction in the woman, so to speak, takes place, the organ proves insufficient for its work. Convulsions may come on instead of pyæmic chills. In our opinion, the examination of the urine in pregnant women is too often neglected, and even when we find pus in the urine, we pay too little heed to it. In almost all the cases I have seen, the patients rarely get through without some serious trouble. My brother had one case which he judged to be a syphilitic, and treated her with iodide of potash, and she got through without much inconvenience. But, as a rule, we give some tonic remedies, treat their symptoms and wait, and the result is the patient dies or goes on to full term and is in such a condition that she is ill able to bear the ordeal.

A case in point came under the observation of my brother some years ago when I was a student. The patient complained of considerable pain in the region of the left ovary, but very little pain in the lumbar region. Her urine contained pus in abundance. He obtained the consultation

of some of the best talent in the State, and the hardness in the region of the left ovary was decided to be a tumor, and the pus due to a suppurative cystitis. The case continued until she aborted and died in a few hours. The autopsy revealed that this was a case of pyelitis continuing and producing suppurative nephritis and circumscribed peritonitis with adhesions to the colon. If this had been recognized sooner, and premature labor induced before the patient became so exhausted, her life might have been saved.

Then, to sum up, we conclude:

First, that eclampsia does frequently occur after delivery.

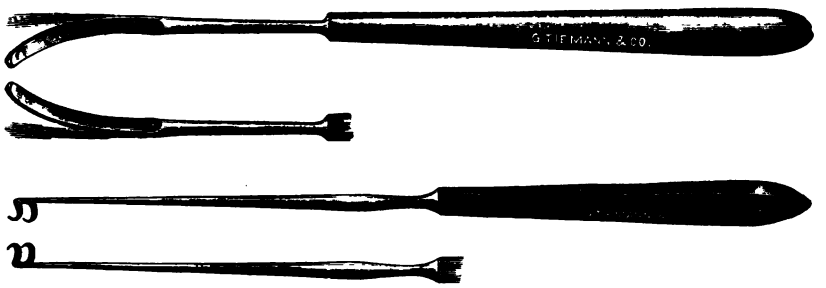
Second, judging from the cases presented, it occurs for the most part in the patients with pyelitis.

Third, when we find pus in the urine of pregnant women and can exclude specific disease of the kidneys, any bladder or urethral disease likely to cause it, and thus feel pretty certain that the pus comes from the kidneys, and if it continues and begins to cause any general disturbance of the health, I believe it is our duty to induce abortion or premature labor and thus save our patient a great risk.

SOME REMARKS ON TONSIL EXCISIONS, WITH PRESENTATION AND DESCRIPTION OF A NEW INSTRUMENT.

BY A. G. HOBBS, M. D., ATLANTA, GA.

The instruments illustrated here are the practical outcome of my efforts through several years to do away with some of the objections to the instruments most commonly used for excising hypertrophied tonsils. For example: the ring tonsillatomes, the guillotines, wire loops, etc., etc. I still, however, use the ring blades in young children and in other cases where the tonsil projects decidedly with a base, but little, if at all, larger than the body.



Most tonsilar hypertrophies do not, however, conform to the above varieties, hence I have sought a more suitable instrument.

The objection to the guillotine or ringed instruments is that the latter, especially, so often leave a margin of bruised tissue, which, in many cases, ends in slough; and with neither of them is the operator quite certain of the exact amount of the tonsil he will clip, especially if the attempt is made on a mass that is soft, broad and nodulated. The cold wire snare causes great pain and requires a much longer

time, and, moreover, it leaves a contused stump unless the whole organ be extirpated, which I never do intentionally. The hot wire, even with the most approved guards, endangers the pillars and is, like the cold wire, quite a formidable instrument, at least in the mind of the patient.

The simplest means and the one least formidable to the patient, other things being equal, is best. Especially is this true if the instrument chosen can be relied upon to do the work quickly, leave a smooth stump that will heal without a slough, and, at the same time, make the section just where the operator desires it.

Some years ago I used the ordinary blunt bistoury with either vulsellum forceps or a tenaculum. I found the vusellum objectionable because its hold could not be quickly loosened in case of gagging, and the tenaculum hook was too long and tore loose more readily than a double

hook. This latter instrument, with its hooks on the sides, is also more easily introduced and it can be instantly loosened by a single rotation of the handle.

The blades, imperfectly illustrated above, are curved both on the flat and on the edge, and are in pairs, right and left. Either blade may, however, be used on either tonsil, especially if the operator is ambidextrous, by making the section upward or downward according to the curve. But in most cases it is easiest and safest to make the section upward to avoid cutting the base of the tongue; the flat curve of the blade will prevent the danger to the posterior pillar.

The firm hold by the double hook enables the operator to lift the mass of tonsil tissue out of its bed from between

the pillars to any extent, even when it is partly overlapped by large pillars.

In a total of something over four thousand tonsil excisions, I find myself choosing these instruments now in at least 75 per cent. of my operations.

Messrs. Tiemann & Co., of New York, are the makers.

EXTIRPATION OF THE RECTUM FOR CARCINOMA.

BY J. MACFADDEN GASTON, M. D., ATLANTA, GA.

The patient referred to in the following clinical notes was presented at my office about the last of June, 1891, by Dr. J. I. Darby, of Columbia, Ala.

He stated that some time previously he had treated the case for hemorrhoids by the injection of carbolic acid, with complete relief in that respect. But that subsequently there was trouble higher up in the rectum with more or less difficulty in evacuating the fæces, and that his general health had become impaired to some extent.

There was no family history of malignant disease, but his appearance led to the conclusion that there might be a cancerous cachexy. Having had occasion to report two cases of papilloma of the rectum with carcinomatous degeneration, which terminated fatally without operation, I recently advised, in a similar case under the care of Dr. K. C. Divine, the extirpation of the entire mass. This was done without serious consequences on May 30th, 1891, and promised a good result, but there was a redevelopment of the induration above with a fatal result.

Temporary relief has been afforded in one of my cases and in one of the above colleague by colostomy; but in this instance the radical operation seems to be indicated.

July 8th, 1891, Mr. W. C. E., a white man, sixty-two years old, apparently without any constitutional disorder, was received at the Providence Infirmary with rectal trouble. Upon digital examination and exploration with the speculum, there was found to exist an induration and thickening of the submucous tissues extending from an

inch within the anus up to the recto-colic junction. The mucous membrane presented a dark congested appearance, attended with some oozing of blood. There was a marked constriction of the upper portion of the indurated structure, but admitting of the passage of the point of the index finger by forcible upward pressure, giving the impression that the structure above was not involved in the disease. It was therefore determined after consultation with several colleagues, that we had a case of carcinoma of the rectum of a circumscribed nature, which warranted an operation, and extirpation was performed as follows:

The patient was given a whiskey toddy, and a hypodermic injection of morphine, gr. $\frac{1}{4}$, with atropia gr. $\frac{1}{150}$, was administered, after which he was placed under the anæsthetic influence of the A. C. E. mixture.

Having shaved the surface around the anus and over the sacrum, the parts were thoroughly washed, and all antiseptic precautions were adopted.

An incision of a semi-circular form was made on the posterior border of the anus, so as to extend beyond any of the muscular fibres of the sphincter ani and thus exclude this structure. An incision was then made in the median line from the salient convexity of this curved line to the middle of the sacrum, and carried down to the rectum. The os coccygis was now dissected out and removed, when by dissection and laceration of the cellular tissues around the rectum, it was separated from the adjacent structures. A guide to further proceeding was afforded by the index finger of an assistant being introduced through the anus into the rectum, and ligatures of strong silk were carried around the gut just above the internal sphincter and below the induration. Then, the finger was removed, and the ligatures were drawn tightly and tied, so as to control the blood vessels, when the rectum was divided between them by scissors. The indurated mass was now enucleated with

the points of the fingers, until the gut was reached above it, free from any deposition, and it was found that the bowel could be drawn down with little traction. The chain of an ecraseur was passed around the intestine entirely above the indurated and thickened rectum, so as to divide the sound intestinal canal, and thus detach the diseased structure.

The ligature being removed from the lower segment, no bleeding occurred, and it was secured by interrupted suture to the upper segment, thus giving an outlet by the natural channel.

Drainage tubes were placed on each side of the intestine and the linear incision closed by suture excepting at the lower end, without stitching the curved line.

There was but little blood lost, and was controlled by the temporary use of forceps with torsion in conjunction with sponges wrung out of a very hot carbolized solution.

The dressing was completed by dusting with iodoform, a thick layer of iodoform gauze, and a compress of absorbent cotton secured by a bandage around the pelvis.

As the vital forces were somewhat depressed, hypodermics of whiskey had been resorted to toward the close of the operation. After rallying from the anæsthetic, the hypodermic of morphia, gr. $\frac{1}{4}$, with atropia gr. $\frac{1}{150}$, was repeated.

No vomiting ensued, and all food was prohibited for the day, while only milk toast was allowed on the following day.

The patient had a comfortable night, but as it was desirable to keep the bowels from moving, the morphia and atropia was used again next evening.

The clinical record for July 9th states that the patient is getting on fairly well, with pulse of 98 and temperature 100°. Upon removing the dressing on account of serosanguinolent exudation, the wound presented a good aspect.

The urine has been drawn by catheter, and this is to be

continued so as to prevent any straining in the evacuation of the urine. There is no complaint of pain or soreness in the parts involved, and no inclination to evacuate the bowels.

July 10.—The report to-day at 12:30 P. M. is favorable, pulse being 95 beats and temperature 100°, after a good night's rest. He has taken no opiate this morning. Acet. am. f℥iv., aq. camph. f℥ii., was taken in doses of a dessert-spoonful every two hours.

The wound was dressed, and carbolized water thrown in through the drainage tubes. Removed the traction ligature which had been placed in the coats of the upper segment of the intestine, and will remove the drainage tubes to-morrow. He is taking only milk toast thus far as diet.

9:30 A. M., July 11.—Patient passed a good night under hypodermic, and has pulse of 80 and temperature of 100°. Removed drainage tube this morning, and finding a protruding hemorrhoid, injected 10 per cent. solution of carbolic acid. Wound has a good appearance. Patient is cheerful, with some appetite. No tendency to action of bowels, and less irritation of bladder. Urine has been drawn off with catheter.

July 12.—Increase of temperature, being 101°, and pulse 94 beats, with slight tympanites and soreness on percussion over the abdomen. There has been a desire to evacuate the bowels, which, however, has passed off again. There was fæcal matter on the dressings, which evidently escaped from the lower part of the wound and not from the anus, indicating that the stitches had yielded so as to admit of its passage. The tube of a Davidson syringe being inserted at the opening left near the anus, a weak solution of carbolic acid in warm water was thrown up into the wound until it passed out entirely free from stain. With a daily repetition, or oftener if necessary, of this wash, it is hoped that no contamination will occur.

This increase of constitutional disturbance may be temporary, and the appearance of the external wound is satisfactory.

JULY 13.—At 11 A. M. found temperature something less than yesterday, but pulse more frequent, and abdomen still sensitive, yet not tympanitic. Bowels were moved through the wound yesterday evening, requiring change of dressing, and washed out thoroughly then, as also this morning, with carbolized water. He takes light nourishment and is cheerful. Ordered to-day:

℞ Huxam's tinct. ..... f ℥ii.
Tinct. nux vomica ..... f ℥i.
Chlorate potash ..... ℥i.
Water q. s. ..... f ℥vi.

Take tablespoonful every four hours as tonic and alterative.

JULY 14.—Patient's condition at noon to-day does not show any aggravation of symptoms since report of yesterday. The temperature is 101¼°; pulse 105 beats; wound presenting good aspect. Fæcal matter still passes by the opening near the anus, and the parts were thoroughly cleansed with the carbolized wash yesterday evening and again this morning, with complete change of dressings. He is anxious to sit up but is not allowed.

JULY 15.—There is nothing in the present condition of the patient to cause any serious apprehension. His temperature at 11 A. M. to-day is 100¼°, being the same as yesterday; but his pulse has risen up to 115 beats, without, however, impairing his appetite or preventing rest at night under the use of the hypodermic (morphine, gr. ¼, atropia, gr. $\frac{1}{150}$). The soreness and tympanites of the abdomen have almost disappeared. Fæces still pass through the wound, but the parts are in good condition.

July 16.—A marked change came about rather unexpectedly during the day, ending in collapse. Hypodermics of whiskey and sulphuric ether, along with the external application of mustard and hot bottles to the lower extremities, were resorted to, and quinine and whiskey given internally, but availed nothing. The wound was opened up by removing all the stitches in the cutaneous incision from the anus up to the sacrum, with thorough cleansing of the entire tract and packing with iodoform gauze.

The prostration ended in a fatal result at 11 P. M. If we could have anticipated the septic developments, and opened up the wound forty-eight hours earlier, the septicæmia might have been averted.

The question may be raised by some in regard to the advantage of reporting surgical cases which have a fatal termination, and yet these are danger signals which may save the unwary mariner from being wrecked in a voyage upon the same sea. All have realized in their own review of unfavorable cases that a useful lesson was learned, and, perhaps, in this special class of cases no feature of the management is more important than to avoid septic contamination from the contact of the fæces with the fresh cut surface. The absorption being rapid, the same kind of effects are produced as in the perforation of the appendix vermiformis with escape of its fæcal contents, and collapse is the consequence at an early period.

In operating under similar circumstances, the open treatment of the wound commends itself to adoption, even when the walls of the upper and lower segment of the intestine are brought together by suture.

When it was discovered that the fæces escaped through the wound, the removal of all the cutaneous stitches was canvassed, but as there was a free communication from the lower to the upper extremity of the wound, admitting of thorough irrigation, this was not done until it was too late.

Had the wound been exposed and packed with antiseptic gauze, it would have offered a better prospect of success and doubtless would have averted the fatal result. Let others profit by this case, having a good promise and bad ending.

THE TREATMENT OF HEMORRHOIDS BY CARBOLIC ACID INJECTIONS.

BY J. W. HALLUM, M. D., CARROLLTON, GA.

The treatment of hemorrhoids by carbolic acid injections is a treatment that I hesitate to present and advocate before this Association, not because of any of its defects, but on account of its opponents.

To Colles, of Dublin, has been accorded the honor of first treating piles hypodermically in 1874.

Dr. S. H. Sturgeon, of this country, claims that he reported cures by the carbolic acid injection in *The Medical Brief* in 1874. There was but little attention given the subject before Dr. W. P. Agnew, of San Francisco, reported his cures by this treatment in *The Toledo Medical and Surgical Journal* in 1877. In 1880, Dr. Blackwood, of Philadelphia, reports his cures by it in the New York *Medical Record.* Since that time there has been volumes written on this subject.

Therefore, I do not expect to introduce anything entirely new; but I do hope that I may be able to interest some of you, at least those of you who have not been making satisfactory cures of this very common disease. Why you have not, I shall not attempt to explain, but describe my mode of proceeding in a country practice, where the office is unhandy, and an operating table or chair unknown. It is not necessary to be a specialist in order to be successful in the treatment of piles by this method. By it, quacks have succeeded admirably and made inroads on our practice.

The cure of this disease is comparatively unknown by the average physician. Are we not too often neglecting the more common diseases for the more rare? Therefore,

I have offered no apology for claiming your time and attention for a few minutes.

It is not the object of this paper to give definitions, symptoms and varieties of hemorrhoids. Also, I know of no reason why I should discuss the pathological anatomy of pile tumors, for they are all alike amenable to this treatment, whether recent or of long standing, venous or arterial origin, blind or bleeding, external or internal.

Hemorrhoids are sometimes complicated with abscess, ulcer, fissure, fistulæ and prolapsed rectum.

The works of Kelsey, Allingham, South and others, give all the discriminating points of diagnosis; and I would respectfully refer you to them for such information. It is absolutely necessary to make no mistake in diagnosis when we go to apply the carbolic acid treatment, because I am satisfied it would be unsafe to inject a prolapsed rectum, or other healthy tissue with carbolic acid.

Piles are uncommon in either sex before puberty, and I have never yet seen one in children. However, Mr. Bryant, in his Surgery, on page 533, speaks of a treatment, and says it is alike beneficial to child and adult.

I know of no cause of hemorrhoids that would contra-indicate the use of the carbolic acid treatment. Yet I would not urge this mode in all cases without regard to patient's previous history. We are often applied to for treatment for piles, when there is really no pile—nothing more than an irritated rectum, caused by straining, diarrhœa, a night's debauch, or the presence of some foreign substance. Such cases will readily yield, generally, to hot water enematas administered two or three times daily.

There is another class of cases that I always advise to "wait for a more convenient season" to receive treatment. These are cases of pregnancy. The household syringe will render these also bearable until her term is passed, and

then if her piles continue, we should advise her to have them treated.

But in most cases that apply for relief it is unnecessary to delay, but proceed at once to make a radical cure of the pile tumor. We do this by mixing together pure carbolic acid one part, and pure glycerine two parts, and enough morphine and tannic acid that ten drops of mixture will contain one quarter of a grain each. Let this be thoroughly dissolved before using it.

I will not describe all the positions in which a patient may be placed for this operation. It is so simple that it can be done in any position that will command a good view of the tumor. The position that I have found to be probably the best is the one in which a toad assumes when in a sitting posture. In this position the patient will almost invariably pass out the tumors by an effort at straining down. However, if he should fail, then by gently manipulating with the fingers the contraction of the anal sphincters will be overcome and allow the tumor to readily pass out. When operating in the office, I use a table about 18 or 20 inches wide, 30 inches high, with a stool at one end. The patient sits on the stool with the knees and lies down on the table, the face downward. This is a splendid position for this operation. For obvious reasons we select the tumor highest up the rectum for first injection. We then insert the needle at right angle to the base of the tumor near its base, and let the deposits be made at different places by moving the needle as the process of injection takes place. Allow the needle to remain in position till the blood of the tumor is coagulated, which will be accomplished in about half a minute. Then the tumor is reduced, when possible, well greased, and the operation is complete for that time.

There is more or less burning for a few minutes consequent from the injection, after which, in the course of five

or six hours, the tumor begins to throb and ache from the swelling and also the death of the pile itself. This pain will continue generally from one to not over fifteen hours. The latter is in case of a large external irreducible tumor. In about three or four days the sloughing is complete, leaving a granulating surface which heals rapidly. After the healing process is complete, the next tumor may be treated in a similar way to the first, and so on till all have been destroyed.

We prefer to inject the tumor while it is engorged, in which case the pain is not increased, but actually diminished.

I have never yet needed a speculum or any other instrument except the hypodermic syringe to do this operation successfully.

We will suggest that not over two or three small tumors be injected at a time, and not over one when it is very large, because of the swelling consequent from the operation. Patients seldom suffer more at any other time than they do from a fit or paroxysm of the piles.

We should advise our patients not to indulge in any physical exercise that requires much effort, but ordinarily they are able to be up and do light work all the while.

Nothing more than a gentle laxative should ever be used for the bowels.

For the last ten years, this plan of treatment has never produced any alarming symptoms—no secondary hemorrhage, and no sloughing, except the pile itself. By it I have yet to report my first failure.

By this mode Drs. E. J. Dennis, of Kansas City; Fred. R. Boyd, of St. Joseph, Mo.; Q. A. Shufford, of Tyler, Texas; W. L. Rodman, of the University of Kentucky, have cured their hundreds; while W. P. Agnew, of San Francisco; Ivies & Davis, of Chicago; Kelley, of Cincinnati; Monroe, of Louisville; E. F. Hoyt, of New York, have each cured their thousands.

DISCUSSION ON DR. HALLUM'S PAPER.

Dr. J. MacFadden Gaston: I happen to have had some experience in this line of treatment, having commenced it early after it was originally introduced into the profession, and from time to time I have used it in different forms. It strikes me the strength of the solution recommended by the essayist is unnecessary. Indeed, in those cases in which I used a combination of carbolic acid in my early experiments with it, approaching this strength, I found I got sloughing of the tissues, which is quite unnecessary to secure a good result. Since that time, I have been using a 12½ per cent. solution of carbolic acid, and simply adding glycerine and water to make the solution without further medication. My formula has been: One drachm of carbolic acid, three drachms of glycerine, and four drachms of water. In an isolated case, I used a somewhat weaker solution on account of the woman being pregnant, and failed to secure as good a result. I have used carbolic acid injections in all grades of piles, external and internal, and more or less indurated, and invariably I have secured a good result without any untoward consequence. It strikes me that the strength of solution which Dr. Hallum recommends is entirely unsafe in the case of internal piles. It would be a matter of little consequence in a case of protruding piles. The internal hemorrhoid, which involves the hemorrhoidal vessels, injected with a 33⅓ per cent., leading to sloughing, might be attended with inconvenience, and we should, therefore, err on the side of prudence in using the solution. I am aware that specialists in the treatment of rectal troubles seem to ignore this line of treatment on account of the idea that it was taken hold of by quacks in the early period of its use. This should be no ground for objection, and it is well that we are getting accummulated evidence in connection with the experience of carbolic acid.

Dr. Moore: Do you accomplish suppuration?

Dr. Gaston: There is brought about a changed structure of the tissues and gradual obliteration. In most cases there has been no breaking down of tissue, but more or less induration and gradual shrinkage of the tissues. In a few cases I have had a little breaking down of tissue.

Dr. Moore: What strength do you use?

Dr. Gaston: Twelve and a half per cent.

Dr. Moore: I never knew what strength to use to bring about a relaxed condition of the parts.

Dr. J. J. Hill: I would like to state, in addition to the remarks that have been made, that I have been using a solution consisting of thymol, grs. 30, of acetate of morphine, grs. 5, glycerine, one ounce, and distilled water an ounce. I have treated about twenty-five cases in the last two years with satisfactory results.

With regard to the treatment of internal hemorrhoids, I find, that by using a solution of from 3 to 5 minims, I have never, in a single instance, had a slough or ulcer.

My method of treatment is, first to throw into the rectum with a small half-ounce syringe, a 3 to 5 per cent. solution of cocaine to deaden the sensibility, then by the use of (Tiemann's) bi-valve or tri-valve speculum, I dilate the rectum sufficiently wide to get a good view of the hemorrhoid. Looking above and behind the tumor, I find imbedded in the superficial structure the small vessel that feeds the tumor. After finding the vessel, I puncture and bleed it with the hypodermic syringe, and after it has nearly emptied itself, I then inject the solution into the vessel, cutting it off. Again looking for other tumors, I treat them in the same manner while the rectum is fully dilated and anæsthetized, continuing until I have injected as many as four or five at one application. After cutting off the circulation, the next thing is to stimulate absorption. I do that with identically the same solution, by injecting the tumor

every 3 to 5 days until it disappears, carefully guarding against injecting the muscular tissue, as experience has taught me that abscess and slough will occur frequently after injecting the muscular substance.

External hemorrhoids I treat in the same way, but with greater facility, because you can more easily find the vessel that has given way and continues to feed the tumor, and obliterate it. The after treatment being the same, with the additional requirement of reducing the tumor after each application beyond the external sphincter muscle, to relieve contraction of parts and allow more ready absorption of the tumor. After the tumor has absorbed sufficiently not to protrude, then I anæsthetize the parts with cocaine and dilate freely, and treat as before stated.

After treating twenty or twenty-five cases, I have not had a single case that I did not relieve, and have seldom had to use the knife or ligature except to remove an occasional skin fold around the margin of the anus after the tumor had been shrunken from it. Yet, as they give no trouble, I leave it with the patient, and if he prefers, it is easily done with the knife, cautery or ligature.

In conclusion, I claim this advantage over carbolic injection: It causes less pain, and there is less danger of abscesses and sloughs.

Dr. C. D. Hurt: I would like to know whether Dr. Hallum has been successful in his treatment of bleeding hemorrhoidal tumors? There are some cases that bleed every day, or at least every time the patient goes to stool he loses from one to two ounces of blood. I would like to ask him whether the treatment he has mentioned is sufficient to control these bleeding tumors. I would state that in treating these cases of hemorrhoids, I met with one case that had five or six tumors, one of which was bleeding for ten years, and the loss of blood was affecting the patient a good deal. He had grown weak, and the general strength

gave way. I used a carbolic acid injection in some of these tumors, and have also used it in bleeding tumors, but for some reason the hemorrhage was not controlled, consequently I had to resort to the ligature, after which the results were satisfactory.

Dr. J. W. Hallum, in closing the discussion, said: Mr. President, there are just one or two points that I desire to refer to. In the first place, Dr. Gaston thinks that my solution is too strong, or, at least, that it is stronger than necessary. I beg leave to differ with him, for the reason that my object is, when I inject a pile tumor, to kill it just as dead as I can and as quick as I can. If you use a weak solution, you will find in a great many cases by so doing that you only convert the tumor into an abscess. I have seen a great many of them; they finally burst like an ordinary abscess leaving the inner layer of the mucous membrane hanging down in a kind of grape-hull shape. In those cases where we produce that suppurative process, we have more pain than we do where we put in enough carbolic acid to kill the tumor in three or four hours, so that it is as black as it ever is. I have treated a great many cases in an experience of over ten years—I do not know the number as I have not looked over my note-book—and when I can get the immediate effect of the carbolic acid by coagulating the tumor and cutting off all blood supply in all its parts, we have comparatively little, if any, pain. For that reason, I prefer to inject a pile tumor when it is engorged. As soon as patients apply to you for treatment, then is the time to begin, and in five minutes your patient is comfortable. He can get in a buggy and ride for miles without any inconvenience.

Dr. Hill said something about causing the tumor to shrink up and leaving a little skin flap; that is one thing I should want to avoid, and it is another reason for killing

the tumor quickly. Sometimes they become irritative afterwards and prove a source of considerable annoyance.

Dr. Hurt asked the question whether bleeding tumors could be also treated by this method. I say they can, most emphatically, though you will sometimes have to make your solution even stronger than 30 or 33 per cent. to do it. Occasionally you will have to put more tannic acid in it. I do not recollect of using a stronger solution than 50 per cent. of carbolic acid. I have never had any constitutional symptoms, but have had considerable pain in a few instances where the patient would go to work after the operation.

Dr. J. MacFadden Gaston: I have had a case under my care within the last few days, and presenting some peculiar features, which I think will be of interest to the members of the Association. The patient was the subject of phthisis pulmonalis; had been under treatment for some time, and in which there were bleeding piles. There was a daily evacuation from them of several spoonsful of blood, sometimes coagulated, sometimes not. In the meantime protrusion of hemorrhoids occurred, which kept up, and was causing the patient great annoyance. I therefore injected these hemorrhoids with the solution of carbolic acid in two points. There was no recurrence of the bleeding from the moment the injection was made. On yesterday, upon inspecting the parts, I found that the tissues had almost shrunken away entirely. I did not anticipate so favorable a result in this case. The external piles were allowed to remain protruded, yet the evacuations since have been unattended with blood.

TYPHO-MALARIAL FEVER.

BY J. W. DUNCAN, M. D., ATLANTA, GA.

Typho-malarial fever is a disease about which very little has been written, so far as I have observed.

Its name implies that it is a compound disease, therefore its causes must be multiple.

The etiology may be considered under the heads of, first, predisposing, and second, exciting causes.

There is perhaps no age at which a person can be said to be exempt from the disease, but the predisposition is greater in childhood and early adult life than in middle life or old age.

Seasons have a marked influence in producing an increase or diminution of the fever. It is more common in summer and autumn than in the winter and spring.

Hot weather, in connection with a dry season, will perhaps be attended with an increase of the malady above that of a dry season and low temperature; but the dry weather seems to have more to do in the production of the disease than the heat.

I believe that the poison, or agent, which produces the typhoid element in the disease, is rendered potent by dry weather, whether it be a living germ or not; and that it is rendered innoxious by frequent rains. My observations have been that the disease is more common and severe in those sections where the surface of the earth dries quickly than where the soil is less porous.

As regards the malarial element in the disease, I know there have been a number of theories as to its etiology, yet, so far as I am informed, no chemist has been able to demonstrate the existence of malaria. Yet, that which is worth

far more to the practitioner than any theory, the fact of its existence from its effect upon the human organism, stands up before us, and we can not deny its entity, although it has baffled the skill of the chemist, with all his analytical resources. It is generated in greatest abundance in marshes, which contain a high percentage of organic matter. Hence the name marsh miasm. Notwithstanding the above name, it is often observed to manifest itself in quite a variety of soils and climates, and has even been quarried out from its pent-up bed in the granite rocks of Hong Kong. From some observations it does not seem necessary that there be surface moisture to produce the poison, but submoisture even under a very dry surface, especially if the soil be disturbed, or thrown up during warm weather, or if a forest be removed so as to allow the sun to dry the surface while the substrata is still moist, the noxious agent, with such conditions, will manifest itself upon the human organism. Decaying matter, heat and moisture, are believed to be in a sense essential in the production of the poison.

We are forced to acknowledge that the elements essential to the production of the toxic agent are found in many parts of the world. I do not claim that the topography, climate and soil of this State is a garden or bed prolific in the generation of the miasmatic germ, but I am fully convinced that there is a sufficient amount of miasmatic poison generated here to produce a toxic influence upon the human system, and whether it manifests itself in intermittent or remittent fever or not, whatever the ailment may be, while the system is thus impressed with miasm, periodicity is sure to show itself.

I do not believe that the agent which is capable of producing such curious impress of periodicity, as is observed in malarial fevers, and the septic agent or bacillus, which produces typhoid fever, are ever united outside the human

system into a compound third agent capable of producing typho-malarial fever, but the malarial element may exist in the system before the typhoid agent enters, or they may enter simultaneously.

I do not propose to enter into an argument on the nomenclature in this paper. The disease has had quite a variety of synonyms, for instance, "pseudo typhoid," "gastric fever," "nervous remittent," "continued remittent." These and many other names have been applied to the peculiar compound disease which I am trying to describe. Typho-malarial fever is the name which I believe to be the most appropriate, and it has been adopted by quite a number of the profession, since the late war between the States.

The camp fever of the army of the Potomac was generally recognized as a typho-malarial fever, in which the symptoms of typhoid fever, diarrhœa, rose rash, etc., were associated with those of malarial fever. Contagion is supposed to be among its exciting causes by some of the profession and many of the laity, but I do not believe that it is contagious in the sense that measles, whooping cough, smallpox, etc., are, but those who are almost constantly in the sick chamber, and who are perhaps necessarily exposed to the same zymotic influences which caused the disease in the first case, or cases, are very likely to succumb to these influences. Yet it must be admitted that the occurrence of any number of cases simultaneously or successively in any house, or neighborhood, can never prove the fact of contagion.

I am inclined to believe in the spontaneous origin of the disease wherever sanitation is wholly or in part neglected, and notwithstanding the sanitary regulations in our cities, and the noble efforts of our city officials to enforce the same, we may find dunghills, animal and human, accumulated, or pent up sewage, cesspools, contaminated wells, decaying vegetables, poorly constructed basements, damp

cellars, and last, but not least, in the *heat* of *summer*, streets torn up from one to ten feet in depth along many of our populous thoroughfares. These things cause an effluvia to arise and spread over the people, which, if it cannot be felt, can be smelt.

It may be that the electric state of the atmosphere is so modified by these causes, that we are called upon to give up a part of our nervous force, and thus our equilibrium is destroyed, but I am inclined to believe that the poisons enter the system by inhalation, absorption and ingestion, and having gained admission, the enemy attacks the nervous centers *per se*, especially the sympathetic, and its depressing influence on the great ganglionic system produces the secondary local manifestations, as observed in the enlarged, softened, and later on, ulcerated solitary glands, enlarged liver and spleen, and these together with the poisoned nervous centers, bring about the train of constitutional symptoms.

Dr. C. Coleman Benson, of Baltimore, Md., says, from observation based upon hypothesis: "I feel assured that the irritation and pathology of all fevers lie in the excessive activity of the large ganglionic cells of the gray matter of the anterior cornua of the spinal cord, and of the cardiac and respiratory centers in the medulla oblongata, due to the disturbed electric balance of the sympathetic and spinal nervous system, and that fever or rise of temperature is but a symptom of that nervous condition."

In support of this view, he says: "Irrespective of my recent chemical success, temperature is controlled by motor depressants, as aconite, veratrum, quinine, etc., but the effects of the fever are the serious points for treatment, and those which generally baffle the practitioner and lead to a fatal issue.

"When the temperature does not exceed 101° F. the disturbance is chiefly in the sympathetic nervous system, and

indicates the first stage of irritation in it, and in the cord and centers of the medulla, but when the temperature exceeds 102.5° F. then the sympathetic system has become paralyzed, and the arterial circulation is left to the control of the ganglionic centers of the cord and medulla, by which these centers become enlarged with blood and paralyzed in their functional action on the muscular and other tissues and glands of the body.

"In this condition the tissues are devitalized, undergo chemical changes of combustion by oxidation, which leads to their waste, and when that wasting has reached the point of starvation, then the brain becomes involved, and delirium is established."

The diagnosis required that there shall be present in the case, in a degree, the local and constitutional manifestations of typhoid fever, associated with malaria or periodicity, one of its leading phenomena.

The attack is more often abrupt, and more frequently attended with a chill, than in simple typhoid. There is greater tendency to biliousness. The temperature in the first week rises higher than in the non-malarial.

There is more gastric disturbance and less tendency to delirium than in simple typhoid. There is also a greater tendency to the accumulation of effete material. There is usually less diarrhœa and tympanites, than in the unmixed disease. Relapses are more frequent and less severe.

There are greater variations in the daily temperature than in typhoid fever. The tongue is more serrated at the edges, and less disposed to be red and more to be coated, than in the pure typhoid type.

During the first five or ten days there are periodic remissions and exacerbations, accompanied with coolness of the extremities; and if nothing be used to interrupt these remissions and exacerbations, they may continue throughout the entire course of the disease.

The duration of the disease is from two to six weeks.

There may be epistaxis during the first or second week, but the hemorrhage most to be dreaded is from the intestines, which takes place, if at all, late in the disease.

I have observed it even after convalescence seemed to be very well established.

The prognosis in consequence of such accidents, or complications, must be formed or expressed with great caution.

The mortality, however, is not as great as in pure typhoid fever. Whether this be due to an antagonistic influence of the two toxic elements on each other, or to more rational therapeutics, it is difficult for me to decide; at any rate, the disease is more amenable to treatment.

Pneumonia occasionally develops in the course of the disease, especially the prostratic variety, and owing to the nervous system being obtunded, the pneumonia may make considerable progress before it is discovered, unless we institute physical examination from slight premonitions of the disease. Inflammation and even suppuration of the parotid glands have been observed in a number of cases, and when the parotid glands are involved there is some danger of a metastasis to the testicles.

When the parotid glands do suppurate, the pus is unhealthy, thin and icorous, and is disposed to disseminate itself in the gland and adjacent cellular tissue, and in some cases it is absorbed and carried into the general system, greatly increasing the septic condition.

Treatment. In the early stage of the disease, while there are headache, backache, and aches generally, I like the effect of salicylate of soda, salol, or phenacetine. Quinine acts well in equalizing the circulation, and aids in preventing the cold stage, and for this purpose the sulphate or bi-sulphate may be given in 5 or 10 gr. doses once or twice in the twenty-four hours; but I am not in favor of using it in large doses, with a view to its antipyretic effect,

for I have seen patients deranged for hours by large doses given for this purpose.

Tinct. veratrum viride, tinct. aconite, fluid extract gelsemium, either one alone or all combined, act well in lowering the temperature in the early stages.

The coal tar preparations: antifebrin, antipyrine, phenacetine, etc., in small doses, repeated *pro re nata*, have a very decided effect in lowering the temperature, but great caution must be used in their use. I consider phenacetine the least depressing of any that I have used.

Frequent sponging with tepid water is useful, and very grateful to the patient. I have used the wet pack in a number of cases, with good results. Where there is dryness of the mouth and great thirst, I have used fluid extract jaborandi with good results.

To revive the action of the liver and improve the secretions generally, mercurials may be used more freely and frequently than in simple typhoid fever, and I believe that the bichloride of mercury, from its antiseptic properties, may be given, with a view of accomplishing more than a simple action on the secernant system.

I have given turpentine emulsion very rarely for a number of years.

I use turpentine locally over the abdomen in the form of stupes, etc., and believe it to be very useful. I have used the comp. tinc. iodine, carbolic acid and glycerine in combination. I was well pleased with the results, but later I used, with more satisfactory results, tinct. iodine, comp. tinct. mur. iron, pure pepsin, cinnamon water and glycerine. The pepsin aids digestion, while the iron and iodine form a valuable antiseptic tonic and stimulant. I was led to use the above combination in typho-malarial fever from having treated successfully chronic intermittent fever with it. Opiates are often indicated to procure rest and check diarrhœa.

Flushing the bowels once daily with tepid water from one to two quarts, in which 10 gr. of salicylate soda and 60 gr. of boric acid have been dissolved, helps to prevent diarrhœa and tympanites.

Where headache is severe, bromo-caffein acts well, and has a soothing effect on the stomach and nervous system.

Tinct. digitalis improves the action of the kidneys, and gives tone to the heart; when the pulse is frequent and feeble, it may be given to increase the force and lessen the frequency.

When tympanites is present, sulphite soda and charcoal, either alone or combined, may be given with great benefit, and also enemas, containing tinct. assafœtida, are beneficial.

When alcoholics are used, the purest wines and brandies should be selected.

The effect of the stimulant and the condition of the patient should govern us as to the quantity to be given in the twenty-four hours.

Hemorrhages and other complications should be managed the same as they are in typhoid fever.

The diet should be principally fluid, consisting of milk, soup and meat essences. The patient should be encouraged to take as much nourishment as he can appropriate without inconvenience, as it will sustain his strength and help to prevent the ultimate fatal collapse, which should be guarded against in all asthenic diseases. We should insist upon his having nourishment systematically, if not scientifically. If the patient be rational and express a constant desire for any article of diet, his craving may be regarded as a demand of nature, in which case he may be permitted to eat that which is ordinarily interdicted, and will do so, if allowed, with apparent benefit.

During convalescence, I have in some cases given the comp. syrup hypophosphites, and I believe that it has been beneficial. I quote again from C. Coleman Benson. He

says: "My specific for all temperatures from 101° to 107° F. and dependent symptoms, is phosphorus, which should be given in temperatures from 99° to 101° in doses of $\frac{1}{150}$ of a gr. every half hour for six doses, and then every two hours during the day till reduction of temperature to normal."

If the temperature vary from 101.5° to 107° then give $\frac{1}{100}$ of a gr. every half hour for four doses, and then every two hours during the day till reduction in temperature to normal, never, however, exceeding in the twenty-four hours $\frac{1}{3}$ gr., and even less, if epigastric pain be produced by it. The temperature at first will rise slightly, but descend rapidly from 3° to 4°. When the normal temperature has been attained, and remained so for 24 hours, then give the $\frac{1}{100}$ of a gr. with food twice only in the day.

While I admit that phosphorus is a very excellent nerve tonic and stimulant, acting on the circulation through the nervous system, causing the pulse to be fuller and more frequent, disturbing the capillaries until free perspiration follows, and from its primary action, increasing the heat of the surface of the body slightly, its secondary effect lowers temperature. It accelerates cell growth in the body. It acts as a diuretic. The urates and urea are greatly increased in the urine. Yet I do not think it should be considered a specific for fevers. It may act well as an auxiliary in the management of some cases; and doubtless it does.

But I think that antiseptics should form the basis of treatment in all cases which have sepsis as the exciting cause. While it may not play an important part in causing the fever under consideration, it does serve as the *materies morbi* in many cases of sickness attended with high temperatures.

We should not allow ourselves to be led astray by hob-

bies and specifics, so-called, but should try to meet the indications in each individual case.

It is well known that pyrexia results from various causes; therefore, we should select our remedies with the view of removing the cause, as well as relieving the symptoms.

The disease under consideration, as well as many others, are classed as self-limited; therefore, it is claimed that nothing can be done to shorten the duration; we can only use placebos and look wise, and wait for the *vis medicatrix naturæ* to do the rest. But I believe the time will come when many of the so-called self-limited diseases will be greatly abridged, if not aborted. It is well known from clinical experience that pneumonia has often been cut short in the first stage, and I believe that remedies can be used in typho-malarial fever that will very much aid in the elimination of the poisons from the system, if not in some degree neutralize them.

Our object in every case and class of disease should be to aid nature. Every person who is exposed to the bacilli of typhoid and the miasm of malaria do not succumb to them; but nature, ever true to herself, neutralizes, eliminates and subjugates them, and man, the grandest being on earth, moves on, notwithstanding the pestilence.

RADICAL SURGERY THE BEST SURGERY IN THE TREATMENT OF EXTENSIVE LACERATED AND CONTUSED WOUNDS OF THE EXTREMITIES.

BY EVERARD HAMILTON RICHARDSON, M. D., ATLANTA, GA.

In this paper the effort will be made to show that notwithstanding the brilliant results achieved by antiseptic surgery during the past decade and a half, the tendency to establish the doctrine that conservative surgery is the *ultima thule* in the management of every class of wounds, including severely lacerated and contused wounds of the upper and lower extremities, is a pernicious one, fraught with great danger to the lives of very many of the subjects of this class of injuries. When old and distinguished surgeons declare with eloquent zeal to medical audiences composed largely of junior members of the profession, "that in a retrospect of their experience and recounting the number of limbs sacrificed under old methods of treatment, they would like to dig up some of their sacrificed limbs and try them over again under modern antiseptic surgery," they little dream of the harm to humanity that the promulgation of such teaching is calculated to produce. The fact that Lister has by asepsis and antisepsis revolutionized surgery, and produced marvelous and phenomenal results undreamed of in the philosophy of surgery previous to the inspiration of Joseph Lister, has made it very natural for surgeons to err on the side of conservatism, and has awakened a feeling of over confidence in their ability to save limbs after lacerated and contused wounds. And the effort to save limbs has too often resulted in the loss of life from *traumatic tetanus*. We do not think it can be gainsaid that the ten-

dency of antiseptic surgery is to lead its devotees to err on the side of conservatism.

In the management of this class of injuries, it is eminently proper for the surgeon to "ponder boldly," and consider "all the woes we see, and worse, the woes we see not."

The liability to tetanus after severely lacerated, contused and punctured wounds of the extremities, is well known by all surgeons of large experience. Its occurrence after minor lacerated, contused and punctured wounds of these parts is also well known, hence its prevention is the highest duty of the surgeon. Indeed, the great mortality of *traumatic tetanus* is so appalling, and its treatment after development so futile and discouraging, that means for its prevention should challenge the surgeon's supremest effort. In the face of Sidney Smith's declaration that "there is nothing so unreliable as figures, except facts," let us for a moment consider the mortality of traumatic tetanus.

Conner states "that taking all the traumatic cases of tetanus together, as met with in military and civil hospitals, the death rate may safely be placed at not less than 80 per cent. of 1,332 cases reported from the wars of the last thirty years, 1,062 proving fatal." "Of three hundred and sixty-three cases in the civil war between the States, 336 died." (Gross.)

Gowers places the mortality at nearly 90 per cent., saying, "that it is rivalled by few acute diseases, and excelled among its congeners only by hydrophobia," emphasizing with the statement that "a very large proportion of those who are attacked die." In this connection it is interesting to remember that after the first month of infancy "up to five years of age, children enjoy almost entire immunity from tetanus. In the thirty years of life, from ten to forty, about three-quarters of the total number of cases occur." And that dark skinned races are more subject to it than any

other race, occurring, too, vastly more frequently in hot than in temperate or cold climates.

Poland declares "that there is scarcely a well authenticated instance of recovery on record from *traumatic tetanus*." Gross, the nestor of American surgery, in commenting upon the prognosis of traumatic tetanus, avers that "in the great majority of cases, death occurs from the third to the fifth day; and if an instance of recovery is occasionally met with, it only goes to confirm the general law of the mortality of this affection. In an experience of fifty years, I have seen but three cases where the patient escaped with his life, and then only after a protracted and painful struggle."

The ultimate causal factor in the production of tetanus cannot, as yet, be considered as definitely settled. This question is still *sub judice*, but the experiments upon lower animals of Carle and Rattone, and later of Nicolaier and E. O. Shakspear, render it probable that tetanus is produced by a specific *bacillus*, and to belong, like hydrophobia, to the class of infectious diseases. Further investigation, however, is necessary to establish their views. But be this as it may, the relationship of tetanus to lacerated, contused and punctured wounds, and the prevention of its development alone, concerns us in this paper. How to minimize and prevent the occurrence of tetanus, after wounds, is a subject worthy of the profoundest endeavors and the most assiduous efforts of the medical profession.

In order to accomplish this object in every severely lacerated, contused or punctured wound of the extremities, impairing the integrity of and exposing nerves, tendons, fasciæ, vessels and bone, make no attempt to save a finger, toe or extremity, but place the patient, without delay, under the best hygienic surroundings, and get rid of the offending member by *immediate amputation* above all injured structure. All punctured, lacerated and contused wounds of the extremities, and, whenever practicable, in any por-

tion of the body, should be laid open, all foreign substance removed, lacerated and contused tissue excised, free drainage established, converting them into simple incised wounds and treated antiseptically. Punctured wounds from blount instruments, rusty nails, etc., however trivial, should be treated upon these principles. The liability to tetanus after incised wounds is comparatively slight.

"Tetanus is rare after operations"—(Gross.) "Tetanus but rarely occasions death after operations"—(Erichsen.) Remove every cause calculated to depress patients: fatigue, draughts, cold and damp favor the development of tetanus, and should be scrupulously avoided. In view of the liability to tetanus after this class of injuries, the do-nothing treatment, so often practiced, and waiting for developments, is reprehensible in the extreme and cannot be too strongly condemned. The rules enunciated in the management of the class of injuries under consideration should be religiously enforced whenever practicable. A flippant disregard of them can be but the result of the grossest ignorance or a want of the proper estimate of human life.

By the proper observance of these rules, coupled with antiseptic surgery, it is no Utopian dream to indulge in the belief that this monster disease, *traumatic tetanus*, will be banished from the catalogue of diseases, and in the future become one of the curiosities of surgery.

FEVERS.

BY H. M. DARDEN, M. D., NORWOOD, GA.

There are three kinds of fevers peculiar to our section of country, and grades or types of each kind. It is not my purpose to give a symptomatic account of each or any of them, but simply be as brief as it may be consistent with their importance with the busy practitioner.

The first I wish to speak of, is chills or intermittent fever, the milder forms of which can frequently be cured with quinine, given during the intermission. I do not believe in the large heroic doses usually now prescribed, which is thought by some authors to break up the disease suddenly. Admitting this to be true, wherever it occurs, it doubtless results in unnecessary prostration; the nerve centres being, as it were, paralyzed. I claim that tonic doses of 2 to 3 grs., four or five times per day, in the early mornings, repeated at intervals of three hours apart, commencing with the decline of the fever, will be sufficient quantity to prevent the successive return of fever, and usually it is accomplished in the course of three days' time. In this way, the fever can be arrested without incurring the deleterious effects of the quinine mentioned.

In the graver type, where the cold spells are very decided, with a definite or irregular recurrence and marked by increased severity, I've found quinine often, in these cases, inadequate for the emergency. Then it is my custom to resort to a formula that has proven a specific, to completely eradicate the malarial poison from the entire system, whether of long or short duration. I do so in the hope that every member of the profession may have an opportunity to test its merits fully. I am confident the results

will be favorable, in offering thus a boon to suffering humanity. Viz:

℞. Sulphate Quinine ..... 2 drachms.
Fowler's Solution Arsenic ..... ½ drachm.
Subcarbonate Iron ..... 2 drachms.
Water ..... 4 ounces.

M. Sig. Dose—Teaspoonful before meals three times *per diem*. Shaking well the solution each time.

The quinine should be dissolved with sulphuric acid. Then add arsenic, and last the iron in rotation. In the event it should disagree with the stomach, lessen the dose, or not give quite so frequently. I make it a rule to press with the thumb the spinal column of the patient to detect tenderness, and wherever it exists, there apply a mustard or fly plaster, until the local hyperæsthesia disappears. This is a species of spinal irritation.

In old chronic forms, where persons having been living in a "malarial atmosphere" for some time, and from thence removed, this treatment, with a calomel and blue mass purge occasionally, will have the happiest effect. In not a single instance have I been disappointed in making a permanent cure. I have observed in treating this class that some require close attention, and that the medicine should be continued for 30 or 35 days in succession. The greater number will rarely have more than one or two chills, and sometimes none, after taking the second dose. With but few exceptions, in ten days' treatment, no matter what may be the ordinary exposures to the weather or what the patient's pabulum, there will be no paroxysms continued. This preparation is a most excellent general tonic and appetizer; as for the latter, it means clean up the table. I have had fine results from its use in weak, delicate individuals of a nervous temperament, wherever there was a deficiency of fibrin in the blood discovered.

The remittent type I treat on the same line as in the intermittent "milder forms." That is, "quinine" stands master of the situation. The only "variation" being in the symptomatic treatment. I give, during the exacerbations of fever, something to control partially, if for nothing else, the rapid circulation, such as veratrum, nitre, gelsemium, or, if you please, some of the new coal tar preparations, alternating with stimulants to prevent cyanosis, with cold cloth to forehead when skin is hot and dry. These means employed judiciously and systematically are not only very grateful but materially aids the weakened powers of nature to surmount every febrile impediment. If there is not anything specially curative in them, they play an important roll in relieving the sick of the debilitating influence consequent upon the much dreaded periods of "high heat tension."

There is a strong sentiment against the use of the antipyretics among the learned professors of medical culture. They exclaim, with Solomon-like authority, that whoever endeavors to break down the fever will kill the patient under the treatment? The logical conclusion, deduced from this manner of reasoning, stamps a fever as an essential factor in combating the stately steppings of "pathology."

As much as it may appear not in strict accord with modern orthodox, dogmatic literature, I cannot refrain from humbly expressing views that are antagonistic and entirely to the opposite in theory. The most rational argument declares that the nearer you approach normal temperature, the safer it is for one's recovery; indeed it is health's mansion of perpetuity. 'Tis wisdom to stay close by the hand of the original blood medium, that which supplies all the varied functions of the human organism normally. There is nothing in abnormal heat or cold beneficial to life force. Nature's wonderful laboratory unfolds its pages of rich hidden stores of arts and virtues, for the

healing of the nations. The idea of skepticism in medicine should alone live in the dark ages of the world.

If the remedial agencies suggested would reduce the temperature beyond all reach, it certainly could be wisely advocated not to interfere with a single prescription. This is not happily the fact, as can be abundantly demonstrated. Whereas, there are the numerous stimulants, tonics, massage and electricity, all at our command, for the prevention, as well as restoration, of any collapse that might be precipitated. The therapeutic articles are harmless when handled carefully. Of course, any medicinal property can be abused. The simplest one in existence can be made injurious without discretion.

Strychnine is a poison, yet it is administered safely and successfully. The studious, determined physician's duty is plainly indicated, by whatever legitimate practice that can be instituted, to lower excessive bodily temperature and thereby help cure the disease. This is a natural statement and no "pet science" can shake its marble foundations.

THE DIAGNOSIS OF SOME ABDOMINAL TUMORS SUPPOSED TO BE OVARIAN.

BY JAMES A. GOGGANS, M. D., ALEXANDER CITY, ALA.

Our text-books often lead one to believe that it is quite an easy matter to differentiate between ascites and abdominal tumors, and I have recently noticed that a few writers have, in referring to their series of abdominal sections for various causes, stated that, "no mistake in diagnosis was made in the whole series."

Now, my experience does not lead me to believe that the diagnosis of abdominal tumors is always such an easy thing to do; and I will make a few remarks on cases which have occurred in my experience which will serve to illustrate the fact that the diagnosis is often difficult, and in some cases, indeed, quite impossible without resorting to an exploratory incision.

The specimen which I hold in my hand, is a part of the remains of a cystic ovary and tube removed from a patient thirty-five years of age. She was taken with pains in the pelvis after having had her fourth child. This pain continued for four years before the abdomen began to enlarge, and at the time I saw her and removed the tumor, the abdomen was extremely large. She had been tapped three times and large quantities of fluid had been withdrawn. The canula had been left in the abdominal cavity for three days, and a solution of iodine had been injected into the cyst which was supposed to exist. I recognized some obscure form of pelvic disease and opened the abdomen for its removal. Two water buckets full of ascitic fluid escaped from the abdominal cavity, when a cystic ovary as large as an orange was found floating in the pelvis. The cyst was

ruptured in the attempt to bring it through the abdominal incision, the pedicle being extremely short. There has been no return of the dropsy, and the patient has made an uninterrupted recovery.

The following case is one of extreme interest, being the only case which has ever recovered in America after operation, and perhaps the only one where operation was undertaken for exactly the same condition in this country.

Patient, 21 years of age, had been in bad health for two years, but her abdominal pains had existed only about eight or ten months. The abdominal enlargement was first noticed only three months before I first saw her. Her father and brother, both physicians, had made the diagnosis of abdominal dropsy, and upon my first examination, I thought that I had to deal with an ovarian cyst. Upon further investigation, I recognized some obscure form of abdominal cyst which could not be elucidated only by an exploratory incision. This was made and the cyst proved to be one of the mesentery. The removal of the sac was impossible, consequently it was incised and emptied of a large amount of thin fluid, the incised lips drawn into the abdominal incision, a glass drainage tube introduced to the bottom of the cyst and drainage kept up until recovery was complete.

The second specimen I show you is a multilocular cyst of the ovary. It was removed from a patient forty-five years of age. The abdomen was quite full of ascitic fluid, and fluctuation in the cyst was very indistinct. In fact the fluid in the cyst was only semi-fluid. The diagnosis in this case was almost impossible. From the fixity of the tumor it seemed to be a most unfavorable case on which to operate; but there was much distress, and as the uterine cavity was not elongated, and there were no other signs indicative of malignant disease, I consented to operate, with the results as I show you. The patient made a perfect recovery.

A few weeks ago I was asked to see a lady who had been told that she was pregnant, and the symptoms pointed very clearly toward pregnancy, the menses having ceased to flow quite suddenly. It turned out to be a dermoid cyst, which in all probability may have been solid originally, and very closely connected with the uterus. I must think that all abdominal surgeons who have much experience encounter more or less difficulty in the diagnosis of many cases. And I believe that we should exhaust every means at our disposal to make a perfect diagnosis, but after doing all this, there are still cases where there is manifest serious abdominal disease, and our course is quite clear that we should not wait for a post-mortem examination to clear our way, but should boldly make an exploratory incision and give the patient a chance for life. I can recall cases sufficient to establish in my mind the fact that many lives may thus be saved, which would, without exploratory incisions, have been sacrificed. I make it a rule to regard all female patients, who are invalids and suffer from incapacitating pains, with surgical suspicion, whether they have a tumor or not. If I can not make the diagnosis perfectly clear, it in no way interferes with me, for I believe the way to duty is quite clear, and that the condition is an unnatural one and demands an operation. I am not an advocate for abdominal section for mere symptoms, especially dysmenorrhœa and the neuroses, but am firmly of the opinion that we should always be able to put our hands on something that we know is pathological, and is causing serious symptoms, before we subject the patient to such a grave procedure. The point I wish to bring out in this paper is, that it is altogether unnecessary to wait and try to map out all of the pathological conditions that may be present in a given case before an operation is undertaken.

SOME OBSERVATIONS UPON CATARACT OPERATIONS AND AFTER TREATMENT.

BY A. W. CALHOUN, M. D., L.L. D., ATLANTA, GA.

In reporting operations upon 904 cases of cataract, it is not intended to go into the details of each case. I desire only to give my experience and the best mode of preparatory and after treatment, based upon the above 904 cases. I should state that the records of the first 47 cases have been lost, so that this report embraces the records of only 857 cases, though in reality 904 have been operated upon. This number includes 203 cases of soft cataract in children and young adults, and 654 cases of hard senile cataract. The ages of the children and young adults ranged from three months up to 25 years of age. The ages of the others ranged as follows: 138 from 25 to 40; 82 from 40 to 50; 98 from 50 to 60; 157 from 60 to 70; 140 from 70 to 80; 28 from 80 to 90; 11 from 90 to 94, making 654 cases of hard cataract, which, including the 203 soft cataracts, makes the 857 cases.

The preparatory treatment of both the soft and hard varieties was about the same. The operation of needling or discission, was made in operating on the soft variety, and with few exceptions with satisfactory results. I will explain in a few words what needling is, as the process is simple. After dilating the pupil with atropia, so as to free the lens from the iris, a cataract needle is passed through the edge of the cornea into the anterior capsule of the lens, and the capsule is more or less freely lacerated; that allows the aqueous humor to come in contact with the broken lens substance and thereby the lens is slowly absorbed. I usually wait about a month after the first operation, then repeat it

through the cornea and dilated pupil. If necessary, at the end of another month I again repeat the operation, and after two or three operations the cataract is entirely absorbed. The patient gets well with a clear and circular pupil. If no other complication exists there is very nearly normal vision.

The balance of this report will be confined to the treatment of hard cataract as we find it in adults, and as a great many of the gentlemen present have not probably made cataract operations, they will pardon me if I go somewhat into details.

Preparatory Treatment. The preparatory treatment, in the first place, is to correct any inflammation that may exist about the eyeball or lid. In a large number of cases, when the patient comes for treatment, there is some simple inflammation of the conjunctiva. My rule is to look particularly into that and see that it is corrected before the operation is made. I also investigate the condition of the nasal duct, the tear canal as we call it, and correct that if it is abnormal. After these inflammations are all corrected the operation can safely be done. When ready to perform the operation I, as a rule, the night previous give some simple purgative and sometimes five grains of quinine. This is routine treatment, and I have gotten good results from it. I go into the room and see that it is properly dusted and the bed linen is clean, and that the room is thoroughly aired the morning before the patient is put to bed. The operation is made upon the patient in bed, and he is kept there for several days thereafter.

Antisepsis. You have all heard a good deal about antisepsis, and I presume you are pretty well versed in it. I cannot urge you too strongly to carry it out. The results are good, as you will find from actual experience. The antisepsis I use here is the bichloride of mercury solution. I put the patient in bed, and then wash his entire face

thoroughly with warm water and castile soap after I and my assistant have antiseptically cleansed our hands. I then wash the conjunctiva of the eyeball and lid with bichloride of mercury solution, 1 to 10,000, which brought down to grains is one-third of a grain to six ounces of boiled water. The lid is everted and washed thoroughly with the bichloride of mercury solution, and with a pipette the eyeball, the cornea and conjunctiva are irrigated with the solution. I never use a sponge, but use absorbent cotton very freely. It is cleanly and more satisfactory. My results have been so good since I have been using the bichloride of mercury, in the strength I have mentioned, that I steadily stand by it. Before the antiseptic treatment was used, I thought I was getting good results when I had 95 per cent. of successes. Now, if I do not have practically a hundred successes out of 100 patients, I think there is something wrong. It is possible that the instruments were not kept altogether as clean formerly as now. If you will read the statistics of the English hospitals, you will find that up to fifteen or twenty years ago they lost from 15 to 20 out of 100. Under antisepsis it has improved until we find very few bad results, except now and then from accidents.

Anœsthetics. Ophthalmic surgeons in this country formerly used chloroform, but since the advent of cocaine, the use of chloroform in eye surgery has been relegated to the past, as there is hardly any necessity for it. There are a great many disadvantages connected with the use of chloroform, and we get most satisfactory results from the use of cocaine. I use a one-half of one per cent. solution. If you reduce that down to grains you can see how small the quantity is. This is the prescription I write in these cases: Muriate of cocaine, $\frac{1}{8}$ grain; bichloride of mercury solution, (1 to 10,000), a drachm. I cocainize both eyes, although I only operate upon the one. If one eye only is cocainized, there is a certain degree of sensitiveness and

dread which the patient does not have when both eyes are cocainized, and for that reason I anæsthetize both.

Instruments. It is necessary that the instruments used in cataract operations should be absolutely clean. I have boiling water by the bedside, and into it I drop my instruments, leave them in a few moments, take them out, and dry them with absorbent cotton. As each instrument is used, it is momentarily placed in the bichloride solution. There are a few instruments that are apt to carry improper material into the eye. On the small iris forceps we use, in making iridectomy, we are liable to have remaining minute particles of blood; around the shoulders of the cystitome is also a favorite place for material to lodge, which, if inserted into the eye, becomes dislodged, and is liable to produce serious results. You get rid of this by boiling your instruments previous to the operation. While we cannot lay too much stress upon the purity of the atmosphere of the room, if we take it for granted that the atmosphere is injuriously impure, we would naturally suppose that unpleasant results would follow after opening the eyeball. As a matter of fact we do not. Often when I open the eyeball there is immediately a bubble of air that enters the anterior chamber. You can see it distinctly; it comes from the room, and we know that the atmosphere of the room is not perfectly pure. In the progress of the operation I try to dislodge this bubble of air, and as a rule I succeed. If I do not dislodge it, I let it alone until it is absorbed. I have not known of a single bad result following this bubble of air getting into the anterior chamber.

The preparatory treatment that I have gone through with applies both to the soft and hard variety of cataract. I make discission upon a child with soft cataract and carry out the same process of preparatory treatment that I adopt in the case of adults.

The question to be decided always by the surgeon is

when to make the operation. Patients often come to you with cataract in a state of immaturity. You have common workmen who are too blind to carry on their daily avocations, but the cataract is not yet ripe. What are we to do with these cases? Formerly we told them that their cataract was not ripe, and that they must wait until it was perfectly mature. That is a sad bit of news to a man who depends upon his daily labor. He cannot work, and you therefore send him home practically blind to live upon his friends. We have made great progress in this respect. There are those who hasten maturity by the needle, lacerating the anterior capsule. That is sometimes done, though I am opposed to it. I would suggest instead a preliminary iridectomy, which gives the patient more vision and prepares him for the operation a little better, probably, than he otherwise would be. If the patient is barely able to get about, and yet has not sufficient vision to attend to any work, I do not hesitate to make the operation just as though the cataract was a matured one. You might ask the question, what do you mean by matured cataract? I mean that the lens has become so opaque, so thoroughly obscured by the opacity of the lens substance, that the patient is no longer able to count fingers at a distance of even one or two inches in front of him. If able to count his fingers at four or ten inches, his cataract is immature. The patient is able to go about, but he can not work, and if he is willing to submit to the operation, I make it, and thus far I have no cause to regret it.

The operation for the hard or senile cataract is that known as extraction. You extract the lens out of the ball. The lens is a small double convex body situated behind the iris and in front of the vitreous humor, that is, a little in front of the center of the eyeball. The operation of extraction is to take out bodily this diseased lens. The one usually made is known as Graefe's operation. There are very

few operators who follow it closely. They deviate from it more or less just as their own experience induces them to do so. After the corneal cut, follows iridectomy, (or no iridectomy as the case may be), which consists in cutting out a portion of the iris, and following that, the breaking of the capsule of the lens and delivering the lens from the position it occupies in the interior of the eye, through the corneal cut. That, in a few words, is extraction.

If you look at the literature of the subject, you will find there are two points of discussion about cataract extraction, viz: extraction of cataract with or without iridectomy. Simple cataract extraction means that you remove the cataract without disfiguring the pupil by an iridectomy. Removing the cataract with an iridectomy means cutting out a portion of the iris, leaving, instead of a circular, rather an oblong pupil. That is the difference between simple extraction and extraction with iridectomy. Both have their advantages and disadvantages. The advantages I think predominate with extraction with iridectomy. Simple extraction is a very beautiful operation, but is nothing new at all. A German physician discovered that by making an iridectomy he could deliver the lens easier, and a great many good results followed the operation. Since that day we have had extraction with iridectomy. The advantage of simple extraction lies chiefly in the fact that the iris is left with a perfectly circular pupil. The ball looks natural, and no one would know that the patient had ever had cataract. Actual statistics prove that the vision of patients with the circular pupil is no better than with an oblong pupil. The advantage of extraction with iridectomy is that the lens is much more easily delivered from its position in the eyeball. With iridectomy you avoid pressure upon the iris, and the danger of prolapse of the iris and iritis largely disappears. Iritis without iridectomy is common. Another advantage of iridectomy is that we can get

the cortical substance out more readily as the lens is extracted from the ball. The edges of the corneal wound pull off some of the lens substance which is retained in the eyeball, and with a pupil perfectly circular, it is very difficult to get this soft substance out, and as a result it remains and often becomes a source of iritis. This is also the cause of secondary cataract; it becomes thick and opaque, and a secondary operation is required. In a number of instances your patient must return at the end of six months and submit to another operation. The advantage of an iridectomy is that it is seldom needful to make an operation for the relief of secondary cataract. I do not find any of the cortical substance remaining behind, sufficient in quantity to produce a membrane interfering with vision.

Delivery of the lens must be preceded by the breaking of the capsule. This is a simple procedure. Formerly it was thought best to make a small opening into the sac, force the lens out, leaving the capsule in position and breaking it up afterwards. That was a useless procedure, inasmuch as it necessitated the patient undergoing a second operation, and patients were very frequently unable to go to that expense and wait for that length of time. The capsule is now freely lacerated, and there is nothing then to hold back any portion of the lens, so far as the capsule is concerned. After having lacerated the capsule and made the iridectomy, I simply press gently the lower corneo-sclerotic margin, tilt the upper edge of the lens slightly forward and it comes out with ease. I then remove the speculum from the lids, let the patient rest a few minutes, and begin the process of dislodging whatever of cortical substance may be left behind. After the operation has been finished in this manner, I go back to antiseptic treatment, using the mercury solution freely, so as to wash the lower lid, and let it come in contact with the eyeball itself.

Some of it gets into the anterior chamber, and aids in washing out portions of remaining lens substance.

This treatment is, of course, susceptible to a great many modifications. Operators modify these things according to their own ideas and experience.

A great deal has been said in regard to the bandage used after operating. Shall the patient sit up with the unoperated eye uncovered? The old method has proven a satisfactory one, and while it keeps the patient in bed a little longer, that weighs nothing in the balance when you consider the fact that under any other treatment you are apt to have accidents. The plan is advocated of simply putting an adhesive plaster across the closed lids, but the safest plan is to take a piece of absorbent cotton, moisten it with white vaseline and fill out the cavity of the orbit above the closed lid, and use the flannel roller bandage, an inch and a half wide, put on in the figure-of-8 position. You can put that on lightly so as to exercise no pressure upon the eyeballs, and the patient can move his head about on the pillow. I would advise those of you who have not had much experience, to see your patient twice a day. Take off the bandage, and with bichloride of mercury bathe the lid on the outside, but do not open the lids unless there is decided inflammation. I keep up that process of twice a day dressing the eye for four or five days, then I lengthen the interval. After the patient has been in bed four to six days I turn one eye loose and keep the other bound until it is ready to be turned loose permanently. That is my mode of after treatment, so far as the bandage is concerned.

In those cases in which there is an irritable condition of the iris, I use a 3 gr. solution of atropia. I pull down the lower lid and drop two or three drops of atropia in the eye, which does away with the danger of iritis. I have had only one case of iritis in the last several hundred cases, and

I am disposed to think that the patient produced it himself by an awkward movement of the hand.

My own experience and that of the New York hospitals is that the operation with iridectomy gives just as good visual results as the operation without iridectomy. I have made most of these operations with iridectomy. The claim for the simple operation without iridectomy is merely that the eye looks more normal and presents a more sightly appearance. In the beginning of my cataract operations, if I got as much as 95 per cent. of successes I thought I was doing well, but since the introduction of cocaine and antiseptic surgery, a hundred per cent. is the usual result, barring accidents. We have arrived at such a state of perfection in operating upon cases of cataract that it is seldom indeed that an eye goes wrong after having been operated on. I have the records of 209 consecutive operations of cataract without a single loss, except in the one in bed at present with violent iritis. There has not been a particle of suppuration in either one of these cases. Of the 209 cases, 30 were soft cataracts requiring needling, and 179 are cases of extraction. Antisepsis and cocaine were the chief factors in obtaining the good results above mentioned.

DISCUSSION ON DR. CALHOUN'S PAPER.

Dr. R. O. Cotter: I am very glad to see that Dr. Calhoun indorses the position which I took two years ago at Brunswick, in respect to the operation without iridectomy, viz: that there is not so much advantage in the so-called new operation as a great many oculists seem to think there is. A great deal has appeared in our medical journals from time to time regarding the so-called new operation. I do not think any one but a surgeon of consummate skill should attempt that operation. I do not see the use of it, and as far as iridectomy is concerned, the upper lid hides the deformity any way. I do not see why we should jeopardize

the operation for the sake of it. Some oculists make a great point in claiming the origination of the isinglass plaster dressing. I recollect that last year at the meeting of the American Medical Association, some gentleman stated that he had been through the hospital of a surgeon who strongly advocated the plaster dressing, and found that his patients were dressed in the usual style without the isinglass plaster. I see the patient every day, but avoid, if possible, interfering with the roller bandage for five or six days, though I may anoint the lids with vaseline to prevent their sticking together. I find it is hard to anæsthetize the iris with less than a 4 per cent. solution of cocaine. A 4 per cent. solution is adopted in the New York hospitals. If the iris is not well anæthetized, the patient's eye will jerk and this may jeopardize the operation somewhat.

Dr. T. M. McIntosh: I rise to compliment Dr. Calhoun upon his excellent results. Recently it has been my pleasure to visit many of the eye clinics of Germany, and all of them where he, twenty years ago received his medical education, Kellway, of Vienna, who taught when he was there, yet always make an iridectomy; Schweigger and Hirschberg, of Berlin, do not, except in special cases that require it, and they claim that vision is better with the circular than the oblong pupil. His care and method of antisepsis is that of Schweigger, except that he—Schweigger—uses a solution 1 to 5,000 to wash the conjunctiva, instead of a 1 to 10,000. He operates before his class in his wards, and any doctor can see him do so. In his last 450 cases his loss has been 5 per cent.

Hirschberg uses no bichloride, but only water sterilized by boiling. He operates in his operating room in his hospital, and no one can see it except by invitation; and each one must dress as one does to witness a laparotomy, with the same precaution as to hand and other disinfection. For operating outside of the hospital, he has had made a

portable instrument—sterilizer—which I have purchased, which has a rest for the instruments while being sterilized, and in which they remain after removal from sterilizer, ready for use. His last 180 operations has had only a loss of one, due to other diseased conditions of the eye.

We should be proud of Dr. Calhoun's results, for they are better than of that surgeon who has the ability to follow in the place of Von Graefe, and as good as the best results of the best surgeons of Germany. These good results of modern eye surgery is due to a careful asepsis, and in my own limited experience of some over one-fourth of a hundred extractions, I can record some losses due to suppuration, which has not occurred in my latest ones.

Dr. R. O. Cotter: How many times can you use your knife without having it sharpened?

Dr. Calhoun: Mr. Powers, quite a celebrated London oculist, stated to me several years ago, that he never used the same cataract knife a second time; that he bought a new knife for every operation. He asked me what my experience was, and I told him that I operated on a dozen cases with the same instrument. Of course this was a little exaggeration on my part, but I thought I would put it as strong the other way, as he did. In reality, I operate three times with one knife, then I send it off to be sharpened. I use Tiemann's knife. I wait until I get eight or ten dulled knives, and then send them by express to New York to be sharpened.

THE INFLUENCE OF CIVILIZATION AND SOCIAL LIFE UPON WOMEN, AS VIEWED FROM A MEDICAL STANDPOINT.

BY D. C. HURT, M. D., COLUMBUS, GA.

Amid all the changes which are taking place in the physical world, human life bears its portion. Whether it be called evolution or change consequent upon improvement or disintegration of human blood and human life, the changes are manifest.

In the science and art of medicine and surgery, great and wonderful strides mark our present era. Whether, therefore, some changes we now discover and attribute to diseases alone may or may not be the outcroppings of inherent or acquired malnutrition, remains yet to be explained. Looking back over the history of our science for the past ages, we find that despite the real changes there are many that are imaginary and dependent upon the fashions of men's mind and reasoning.

Somewhere and somehow there has grown in the human life of females that element of temperament and disposition which brings about more or less of disease destructive to human happiness. While in the present day so much attention is being paid to the diseases peculiar to women, it is highly proper that we, as medical men, should dwell with serious thoughts upon the causes and conditions that bring about these results. It is the office of the physician to assiduously apply himself, first, to preventing, and, secondly, to removing as far as possible all maladies that this human flesh is heir to, but when we open our eyes fully to the condition of 30 per cent. of our women of the present day, the facts stare us in the face that these evils are wonderfully multiplied.

There is a law of our physical being under which we are created, by which our bodies are to be governed for the preservation of health, the maintenance of life and the propagation of our race. What we mean by this law or its application is where not only one organ performs its legitimate function, but where all work together in one harmonious manner. The infringements upon these laws are surely followed by deleterious effects upon the violators. The most sensitive constitutions and the most delicate organs of that constitution are those which yield first to the penalties thus inflicted. We find, therefore, that the female constitution being differently formed, is increased in its nervous sensibilities and thereby more readily yields to such influences as ignore these laws. We find also that the habits of women as we advance in civilization and society life bring them directly to ignore these fundamental laws to such an extent as to create physical deformities and break down their nervous constitution. The fruits of these violations are everywhere manifest, from the slightest degree of nervous disturbance to that giant form insanity, from the most trifling disturbance of the generative system to the most incorrigible and death-dealing contamination of that nature which distinguishes her sex.

Gynæcology existed in the dark ages of medicine, and truly but little was known and less demanded on that line until within our present century. It will not do for us to assume the false argument in this case that, then ignorance was bliss and it was folly to be wise.

A practical demonstration exists to-day by comparison of our savage and civilized women of America. While the Indian squaw is unacquainted with female diseases and broken down constitutions on account thereof, our cultivated and civilized women are growing more and more intolerant of that life which pertains to their special duties as females. The Indian squaw lives in her hut and performs

manual duties and undergoes hard physical labor without any interference with her female nature, and to her the act of parturition is looked upon without dread, carries with it but little pain and scarcely interrupts her duties for one day. Our civilized and cultured women, if forsooth they arrive at healthy womanhood and maturity, are liable at each turn of life to become a prey to some one or more of the thousand maladies that eventually brings them under the care of a gynæcologist. Why this change? What means the multitudes of sanitariums and hospitals for women which are wonderfully on the increase as far as civilization extends? What means this large percentage of our females that must be unsexed in order to extend their days? Shall we accept this as an argument against civilization, culture of mind and body and the study of arts and sciences?

The style of dress which exposes the body to the most inclement weather, producing reversions of cold and heat; waist being tightly laced by steels, the body is kept in such a state of contortion that deformities result and produces deleterious effects upon parturient women, as well as disturbs the function of the whole organism.

The pollution of mind which is developed from reading sensational novels too often beget a corruption of thoughts and desires which militate against these laws of nature and lead to practices and indulgences which drift farther and farther away from an obedience to nature's laws. As one of the outcroppings of such influences I may cite the case of murder which took place at the hands of a young woman a few months ago in the city of Memphis and which has been followed already by like cases. This girl was so infatuated with her love for her own sex as to conceive in her depraved mind the idea of being discarded by her. Again, the French writer Belo, in his book, "My Wife," relates the destruction of the happiness of two families by

that strange infatuation of the love of one man's wife for the wife of another.

Having seen that woman was naturally endowed with physical constitution fitting her for all duties in her sphere, and seeing that now it is with great difficulty she passes through the period of true womanhood without becoming a prey to some disease, we must assign a cause, and if the cause or causes are rightly determined, then we, as medical men and guardians of life and health, ought not to leave undone anything that will aid in bringing succeeding generations back to nature's standard of health and vigor. Whether these duties require us to give attention to the physical, moral, mental and social care of the patient or all of these combined, we should be honest enough with ourselves and have consideration enough for humanity, and have pride enough in our profession to perform these duties well.

How are we in the habit of dealing with this question which relates to the health and happiness of our females? If a lady calls at the office of a physician and he is satisfied after thorough inquiry into her history and her present condition, is he not too often content to make his prescription, accept his fee and tell his patient to call again in a few days, ignoring the fact that some good and wholesome advice pertaining to the management of her system and due care in her social habits, taking of proper food in proper quantities, retiring at healthful and systematic hours, would conduce more to restoring her health than would the prescription alone? In these days when parents are over-indulgent it is often the case that when a girl leaves the nursery with a depraved nervous system, vitiated appetite and a nature too highly sensitive to maintain health with her surroundings, she approaches puberty with her system already unfitted for functions yet to be established. She soon finds that her duties at school make her morose or

irritable and that her mind is not capable of receiving readily the impressions sought, nor her body capable of enduring the fatigue made in search of them; she at once falls into the hands of a physician, who finds already present depletion of the system, impoverished blood, nervous prostration, enfeebled digestion, constipation, amenorrhœa, etc. He begins with tonics, stopping the child from school and directing systematic exercise. He realizes the fact that to do his full duty in the case he must give the parents wholesome instructions, depending upon the execution of which is the future welfare of the girl. In such a case as this the duties of prescribing and proscribing are each alike obligatory upon the physician who seeks to perform well his part as such; and the medical man who is well informed will have the satisfaction in after years of having dealt honestly with his patients.

Again, the girl who is about reaching puberty is rarely ever informed as to the care necessary when anticipating such an event in life, and often, by imprudence and ignorance combined, is at the very onset of womanhood, divested of health and invested with such diseases as entail lifelong suffering. In such cases the family physician will not be overstepping the bounds of propriety in advising the parents so that due caution may be exercised. For it is true that a large per cent. of the cases resulting from such causes, and which we denominate suppressio-mensium, emansio-mensium, are produced at this period of life. The patient falls into our hands emaciated and hysterical, pleading for relief. Up to this time the physician has done well by prescribing medicine and hygiene, but he now enters the field invaded by new diseases, induration, ovaritis, displacements, and menstrual disorders. It is at this point that the gynæcologist, with his armamentarium, appears upon the field and begins his work of investigation.

It is not my purpose in this article to discuss the diagno-

sis and treatment of diseases, but encourage such general oversight and management as shall prevent rather than cure.

Drawing again upon our comparison between the savage and civilized nations, we cannot deny the fact that the discovered cause or causes lay within the range of prevention. These causes, as we have seen, are exerted upon our females at every age of life, upon the child as she leaves the nursery, upon her again as she enters school, and again upon performing school duties in approaching the age of puberty; while she is a young lady devoting herself to society and society life. Upon proper care at these ages our girls may be brought up with a union of the physical, moral and mental forces so combined as to avoid many diseases and render her capable of happiness, and entail the same upon the healthy offspring.

By way of digression, here allow me to allude to our schools of the present day. After years of careful observation, I am fully persuaded that our system of education militates greatly against health and healthy development of our girls. I have observed, as have many of you, the strain upon the nervous system caused by an improper lighting of the study room; as through the medium of the optic nerve so affected, the whole system is often disturbed; also the baneful influence of bad heating and ventilation of school rooms, impairing digestion and the proper growth and development of the body. While my connection with these schools as trustee has led me to these observations, I am glad to say that more interest is taken now than ever before, both by teachers and trustees, looking to the remedying of these evils. A vast amount of literature written by men of experience is being disseminated throughout the entire school system of this country, which promises to be productive of much good to future generations. Again, for the past three decades, it is a fact in statistics

that our Southern families are not as productive as before, and there is a growing disposition to antagonize nature's laws so far as they relate to procreation. The small number of children found in New England fifty years ago showed a marked contrast with the birth rate of the English, Irish and German. I fear that the mania for exemption from this legitimate duty has infested our Southern women and they too are drifting into disease and decay on account thereof. The proud queen of England deserves much more honor to her Royal Highness in the fact that she brought forth, nursed and trained her own children, and thus has placed before her subjects an example worthy of imitation. Could women be convinced that their lives were in jeopardy, upon any deviation or violation of nature's laws, we would have much less need for our sanitariums and the practice of gynæcology.

Resuming, I repeat that prevention of such interference is at once the duty and triumph of our art; the striving after this end, the highest function of medicine. The subject for our protection, the culmination of man's happiness—the most lovable and attractive in true and healthy womanhood.

The time may have been when physicians, lacking in the present information that we have this day attained, not over-crowded with work and exceedingly jealous in the profession, would have decried any efforts tending to these higher duties of life in the prevention of diseases; but in this age of our science, we find those who are best informed the strongest advocates for the proper rearing and development of our physical nature, who concede the necessity of a due regard to the moral and mental culture as well. That physician succeeds best and grows most whose broad philanthropic mind divests him of narrow and contracted views and allows him to reach out for the greatest possibilities of good to humanity. Our object and aim in prosecut-

ing our science should be to carefully guard every element of the human nature, that there may be a uniform and coördinate development of all our faculties. With this purpose steadily in view and the practice constantly maintained, we should not be surprised that on the advent of the next century, forces and influences should be put in operation that would insure for succeeding generations healthfulness of mind and body, longevity and a re-establishment of that endowment to our nature which was originally given by an all-wise Creator.

Then let us begin that revolution which looks with all its combining influences and coöperative mediums to pulling down our hospitals, stamping out diseases and restoring our females to their wonted health, strength and beauty. Let us, by wise counsel prudently given to parents, help them to govern their children, control their appetites to the use of proper diet, root out pernicious habits of dress, train their minds to digest healthful and enlightening literature, cultivate social and moral habits, and thus ward off the miasmatic vices which are ever lurking just outside the nursery and seeking every opportunity to obtain its victim.

Let us call upon the coöperative efforts of those who have the custody of our schools and ask them to demand a strict observance to the rules of hygiene; to bear in mind the fact that the success of instructors depends very largely upon the maintenance of sound bodies in their pupils. Let us, as medical men, lose no opportunity as we come in daily contact with the people, to instill into their minds ideas on every line conducive to health. It is not improbable nor unreasonable for us to expect that ere the dawn of the 20th century, our science shall be able to effectually stamp out many of the epidemics which now run rife over our towns and cities, often depopulating large families. It is not unreasonable for us to look for a Jenner or a Pasteur who shall save us from the ravages of yellow fever, diph-

theria and a host of other ills that occasionally invade our land and country. With our present knowledge of antiseptics, we destroy those bacteria which lie broadcast about our homes, and arrest the germ-producing process already at work in the consumption of our bodies, and we should with equal dexterity and confidence in our skill, remove the cess-pools of moral corruption and elevate the mind to higher functions and duties of life, making void the caverns of sin which pander to depraved appetites, thereby guarding us against those depravities of our nature which tend to foster in us vitiated blood, whose domain it is to contaminate our whole being. We should guard our commonwealth against the concealed viper, discovered only by medical men, which lies ever and anon in our pathway seeking anxiously every opportunity of injecting its venom into the moral and social veins of human life, thereby leaving in us or in our systems that poison which is to be handed to our posterity as a defiled inheritance.

We should warn the people to guard against a Nemesis which stands with uplifted dagger ready to plunge into our bodies and suddenly snatch us out of existence. Let us appeal to our various governments—municipal, State and national—to coöperate with us both by their moral and financial influence, that they may aid us in removing the lepers beyond the reach of contamination, and through their sanitary laws aid us in building bulwarks over which no invaders dare attempt an ascent.

Finally, let us hope that every man, woman and child shall be so invested with the love of purity of life and all that is elevating, ennobling, and refining, that sin and its votaries, which means but the pasture in which diseases are well-bred, shall find but a barren waste and perish thereon.

CONSTITUTION AND BY-LAWS

OF THE

MEDICAL ASSOCIATION OF GEORGIA.

CONSTITUTION.

(ADOPTED 1873.)

ARTICLE I.

NAME.

The name and style of this Association shall be "THE MEDICAL ASSOCIATION OF GEORGIA."

ARTICLE II.

OBJECTS.

SECTION 1. The object of this Association shall be to organize the medical profession of the State in the most efficient manner possible; to encourage a high standard of professional qualifications and ethics, and to promote professional brotherhood.

ARTICLE III.

MEMBERS.

SECTION 1. There shall be only one class of members in this Association. Every regularly educated medical man within the limits of this State, who is a graduate of a regular Medical College in good standing, and who adopts and conforms to the Code of Ethics of the American Medi-

cal Association, shall be eligible to membership in this body.

ARTICLE IV.

OFFICERS.

SECTION 1. The officers of the Medical Association of the State of Georgia shall be as follows: 1st. One President; 2d. Two Vice-Presidents; 3d. One Secretary; 4th. One Treasurer; 5th. Five Censors.

SEC. 2. The President shall be elected for one year; the Vice-Presidents for one year; the Secretary for five years; the Treasurer for five years—but every officer shall continue in office until his successor is elected and installed in office.

SEC. 3. The Board of Censors shall be elected at the present session by the Association—one for a period of five years, one four years, one for three years, one for two years, one for one year; and annually hereafter the vacancy occurring in the Board of Censors shall be filled by election.

ARTICLE V.

PRESIDENT.

SECTION 1. The President shall be the chief executive officer of the Association. He shall preside at all the meetings of the body, preserve order, and give the casting vote when necessary, and perform such other duties as parliamentary usage imposes on presiding officers.

SEC. 2. He shall prepare and deliver, at the opening of each annual session, an address on some subject connected with the interests and objects of this Association.

SEC. 3. He shall appoint annually the requisite number of delegates to the American Medical Association, and to such other scientific bodies as it may be expedient to have this Association represented in.

SEC. 4. He shall appoint an orator, whose duty it shall be to prepare and deliver a public address on some subject connected with medicine, or the medical profession, at the next annual meeting after his appointment.

SEC. 5. He shall, in the intervals between the annual sessions, direct and control the general policy and business of the Association, but always with careful attention to the precedents and customary usages of the Association and to its constitutional provisions.

ARTICLE VI.

VICE-PRESIDENTS.

SECTION 1. Vice-Presidents, in their order, shall, in case of the absence or the death of the President, discharge all the duties belonging to the Presidential office.

ARTICLE VII.

SECRETARY.

SECTION 1. The Secretary shall have charge of all the books, papers and records of the Association, except those belonging to the office of Treasurer.

SEC. 2. He shall record the minutes of the Association at all its meetings.

SEC. 3. He shall conduct the correspondence of the Association under the direction of the President, and shall be chairman of the Publishing Committee.

SEC. 4. He shall keep the roll of the members of this body who have retained their membership by compliance with the provisions of this Constitution, and also the names of those who have forfeited membership, together with the cause of such forfeiture.

SEC. 5. In the absence of the Treasurer he shall collect the usual dues of the members in attendance at the regular sessions.

SEC. 6. The necessary expense incurred by the Secre-

tary, in attending the annual sessions, shall be defrayed out of the funds of the Association.

ARTICLE VIII.

TREASURER.

SECTION 1. The Treasurer shall collect the annual dues and have custody of all the moneys belonging to the Association, and shall respond to the calls of the Secretary by order of the President, as far as he may have funds in his possession.

SEC. 2. He shall make annual reports of the financial condition of the Association, and the several amounts received during the year, and from whom; the several amounts due by the Association—if any—to whom, and on what account; the several amounts due to the Association —if any—by whom, and on what account.

SEC. 3. The necessary expense incurred by the Treasurer, in attending the annual sessions, shall be paid out of the funds of the Association.

ARTICLE IX.

CENSORS.

SECTION 1. The Board of Censors shall hold annual meetings, concurrently with the annual sessions of the Association, to whom shall be referred all applications for membership, with vouchers from two members; and in such case their decision shall be reported to the body for action. Three of their number shall constitute a quorum, and the chairman and secretary shall be designated by the President.

SEC. 2. They shall take cognizance of all offenses against the Association or its Code of Ethics, and shall be authorized to strike from the list of membership all violators of its regulations, and shall report the names of the individuals, and the offense for which action has been

taken, immediately to the Association, at which time, or at the next succeeding meeting, all such individuals may have the right to appeal to that body.

SEC. 3. In the event of a failure of a quorum of the Board of Censors to attend at any annual meeting, it shall be the duty of the President to supply the vacancy by a temporary appointment.

ARTICLE X.

FINANCES.

SECTION 1. Every member of the Association shall pay annually into the Treasury such sum as the Association may determine, which amount, it is expected, will be paid during the session of the body.

ARTICLE XI.

CONSTITUTION.

SECTION 1. The Constitution shall take immediate effect from its adoption.

SEC. 2. The By-Laws now in operation, and Order of Business, are adopted, so far as they agree with the new Constitution.

ARTICLE XII.

ANNUAL MEETING.

SECTION 1. The annual meetings shall take place on the third Wednesday in April, and at such place as shall be designated by a majority of the Association.

ARTICLE XIII.

AMENDMENTS.

SECTION 1. Any amendment that may be offered to the Constitution shall lie over until the next annual meeting; and for its adoption at such meeting shall require a two-thirds vote of all present and voting.

BY-LAWS.

(Adopted 1875.)

ORDER OF BUSINESS.

The order of business of this body, unless ordered by a two-thirds vote of the members, shall be as follows:

1. Calling the Association to order by the President, or in case of his absence, by one of the Vice-Presidents.

2. Report of Committee of Arrangements.

3. President's Address.

4. Reading notes from absentees.

5. Election of members.

6. Reports of Special Committees.

7. Report of Committee on Publication.

8. Report of Committee on Necrology.

9. Report of Committee on Programme.

10. Voluntary communications. [To be read by title and held subject to call of the Association.]

11. Appointments of Nominating Committee by the President. [This committee shall consist of one member from each county represented in the meeting. It shall nominate officers and standing committees. Their report shall be subject to the action of the Association.]

12. Selection of place for next annual meeting.

13. Unfinished business.

14. New business.

15. Report of Nominating Committee.

16. Appointing of Orator by the President.

STANDING COMMITTEES.

The Committee of Arrangements shall consist of five members who reside at the place selected for the ensuing meeting. It shall be their duty to provide suitable accommodations for the meetings of the Association, and to superintend the registration of the members in attendance.

The Committee on Publication shall consist of four members in addition to the Secretary, who is chairman *ex officio*. They shall provide for the publication of the minutes of the session, together with such papers as are deemed worthy. They shall also append to each volume of Transactions a copy of the Constitution and By-Laws of the Association, Roll of Membership, and Code of Ethics of the American Medical Association.

The Committee on Necrology shall consist of five members, whose duty it shall be to procure memorials of deceased members, and present them for publication in the Transactions.

ASSESSMENTS.

Each member shall pay annually to the Association such sums as the Association may determine.

OFFICERS—TIME OF ASSUMING THEIR DUTIES.

The Secretary and Treasurer shall enter upon the duties pertaining to their office at the time of their election; the President, Vice-Presidents and Censors, at the commencement of the annual meeting succeeding their election.

AMENDMENTS.

I.

APPLICANTS FOR MEMBERSHIP.

The names of all applicants for membership shall first be presented to the Association in body, and then referred to the Board of Censors. [See, also, Duties of Censors—Constitution, Article IX., Section 1.]

II.

INITIATION FEE.

An initiation fee of FIVE DOLLARS shall be required of every new member hereinafter elected to the Association; which fee must accompany the application for membership.

III.

ANNUAL ASSESSMENT.

The annual assessment of every member of the Association shall be THREE dollars.

IV.

MEMBERS IN ARREARS.

The name of any member who shall fail for two consecutive years to pay the annual assessment shall be dropped from the roll of membership, the Treasurer notifying such member of the state of his account.

V.

TREASURER'S CALL FOR DUES.

The Treasurer shall, immediately after the meeting of the Association, issue a call for the dues of absent members, by postal card, impressing upon them the need of

prompt payment of the small assessment herein provided, by every member of the Association, and notifying them of the constitutional provision requiring the names of delinquents to be stricken from the roll of membership by the Secretary.

VI.

LIFE-MEMBERSHIP.

The assessment for life-membership shall be THIRTY dollars, exempting from annual dues. The sum so received to be invested and the interest used to pay annual dues of said life-member. A member may hold as many life-memberships as he desires, and shall be entitled to one vote for each.

VII.

PAPERS AND PUBLICATIONS.

1. No paper shall be read before this Association, by title, or otherwise, until a complete copy of such paper shall have been placed in the hands of the Secretary for publication in the Transactions. This rule shall not prevent the publication of such paper in any medical journal, at any time.

2. No article shall be published in the Transactions until it shall have been recommended by the Committee on Publication.

3. Repeals all conflicting laws.

VIII.

AMENDMENTS.

Any change in these By-Laws can only be made by a vote of two-thirds of all the members present.

The Secretary desires to call attention to the following resolution which was adopted by the Association, in Augusta, in 1886, and, while it was not offered as an amendment to

the By-Laws, yet, if carried out, would operate in that way. The resolution is as follows:

"*Resolved*, That the second day of the next and each subsequent session of this Association be set apart for omnibus discussion."

ROLL OF MEMBERS

OF THE

Medical Association of Georgia.

1892.

ARRANGED ALPHABETICALLY.

ABBREVIATIONS.—P., President; V.-P., Vice-President; S., Secretary; C. S., Corresponding Secretary; T., Treasurer; O., Orator; C., Censor; indicating the offices the members hold or have held.

Members are particularly requested to notify the Secretary promptly on making any changes in their postoffices.

The Secretary will esteem it a favor if any member will write him at once on noticing any inaccuracy or omission in the roll.

Name.	Postoffice.	County.	Admitted.
Adams, Wm. E.	Greenesboro	Greene	1891
Allen, H. D	Milledgeville	Baldwin	1891
Anthony, E. R. (V-P)	Griffin	Spalding	1887
Armstrong, W. S	Atlanta	Fulton	1886
Asbury, J. C	Greenesboro	Greene	1891
Atkinson, B	Tarboro	Camden	1890
Avary, Arch	Atlanta	Fulton	1887
Avary, J. C	Atlanta	Fulton	1889
Bacon, W. W.	Albany	Dougherty	1890
Bailey, J. W.	Gainesville	Hall.	1861
Baird, James B. (S., O.)	Atlanta	Fulton	1872
Baldwin, M. A	Cuthbert	Randolph	1890
Bardwell, E. L	Talbotton	Talbot	1872
Battle, H. L	Wadley	Jefferson	1891
Barrier, C. W.	Columbus	Muscogee	1892
Barnum, R. E. L	Richland	Stewart	1892
Barwick, J. B	Blythe	Richmond	1891
Baxley, W. H., Jr	McBean	Richmond	1891

Name.	Postoffice.	County.	Admitted.
Barron, R. B	Macon	Bibb	1884
Battey, H. H.	Rome	Floyd	1882
Battey, Robert (C., P.)	Rome	Floyd	1859
Battey, W. W	Augusta	Richmond	1876
Baskin, R. H	Byron	Houston	1889
Beasley, James A	West Point	Troup	1884
Beazley, J. S	Stilesboro	Bartow	1887
Bell, A. K	Madison	Morgan	1889
Belt, L. J	Herndon	Burke	1888
Benedict, Samuel C	Athens	Clarke	1883
Bishop, J. S	Brunswick	Glynn	1890
Blain, Arthur C	Macon	Bibb	1890
Bloomfield, James C	Athens	Clarke	1890
Botsford, L. B	Brunswick	Glynn	1890
Boyd, Montague L	Savannah	Chatham	1889
Boyd, A. F	Iric	Bulloch	1891
Bozeman, E. K	Friendship	Sumter	1892
Branham, Harris M	Brunswick	Glynn	1890
Brantley, S. D	Sandersville	Washington	1849
Bridges, J. T	Cabaniss	Monroe	1890
Brigham, J. C	Girard	Burke	1891
Brooks, C. A	Americus	Sumter	1888
Brown, H. A	Fort Valley	Houston	1891
Brown, S. E	Eatonton	Putnam	1890
Bruce, W. W	Thomasville	Thomas	1881
Bruce, W. W	Hamilton	Harris	1892
Bryans, R. G	Jackson	Henry	1890
Bryan, James H	Belleview	Talbot	1892
Bryant, W. J	Summerville	Chattooga	1892
Buford, O. H	Mayesville	Jackson	1891
Bullard, W. L	Columbus	Muscogee	1882
Burdett, J. R	Tennille	Washington	1889
Burford, R. E. L	Brunswick	Glynn	1890
Burford, H	Brunswick	Glynn	1888
Butts, J. A	Brunswick	Glynn	1888
Butts, R W	Gordon	Wilkinson	1892
Calhoun, A. W. (V-P., C., P.)	Atlanta	Fulton	1874
Calhoun, F. R. (V-P.)	Cartersville	Bartow	1873
Carmichael, J. H	Augusta	Richmond	1891
Carter, C. J	Lake Park	Lowndes	1889
Chappell, Roy J	Dublin	Laurens	1890
Charlton, T. J	Savannah	Chatham	1887
Cheatham, W. B	Dawson	Terrell	1880
Clark, P. S	Darien	McIntosh	1890

Name.	Postoffice.	County.	Admitted.
Colding, C. H	Savannah	Chatham	1882
Cole, J. F	Carrollton	Carroll	1884
Collier, T. E	Atlanta	Fulton	1887
Coleman, John S	Augusta	Richmond	1891
Coleman, Thomas D	Augusta	Richmond	1891
Comas, P. H	Baxley	Appling	1889
Connally, E. L. (C.)	Atlanta	Fulton	1860
Cooper, H. P	Atlanta	Fulton	1886
Cortelyou, P. R. (V-P.)	Marietta	Cobb	1887
Cotter, R. O	Macon	Bibb	1882
Crawford, J. M	Atlanta	Fulton	1888
Crozier, J. H	Cedar Springs	Early	1889
Crow, W. A	Atlanta	Fulton	1892
Curry, M. L	Brunswick	Glynn	1890
Culpepper, W. F	Senola	Coweta	1892
Crumley, W. F	Oglethorpe	Macon	1892
Coudert, Frank E	Augusta	Richmond	1891
Cox, Ross P	Rome	Floyd	1891
Davidson, A. C	Sharon	Taliaferro	1887
Davis, W. E. B	Rome	Floyd	1892
Davis, T. B	Newnan	Coweta	1892
Darden, N. M	Norwood	Warren	1891
Deadwyler, M. P. (V-P.)	Elberton	Elbert	1868
Dean, J. G	Dawson	Terrell	1889
Derry, H. P	Macon	Bibb	1889
Divine, K. C	Atlanta	Fulton	1882
Dillard, S. H	Greenesboro	Greene	1891
Doster, B. R. (V-P., C.)	Blakeley	Early	1873
Doughty, W. H. (C.)	Augusta	Richmond	1857
Doughty, W. H., Jr	Augusta	Richmond	1880
Douglass, J. E	Cuthbert	Randolph	1889
Drewry, S. C.	Griffin	Fulton	1892
Dudley, M. J	Sonoraville	Gordon	1880
Dugas, George C	Augusta	Richmond	1880
Duggan, J. H	Stephensville	Wilkinson	1884
Duncan, J. W	Atlanta	Fulton	1883
Duncan, William	Savannah	Chatham	1868
Dunwoody, J. A. (V-P)	Brunswick	Glynn	1888
Earnest, J. G	Atlanta	Fulton	1882
Elkin, W. S	Atlanta	Fulton	1882
Elliott, W. H	Savannah	Chatham	1884
England, W. G	Cedartown	Polk	1886
Engram, R. O. (V-P.)	Montezuma	Macon	1881

Name.	Postoffice.	County.	Admitted.
Field, J. C	Oglethorpe	Macon	1889
Fitts, W. L	Carrollton	Carroll	1891
Folks, G. P	Waycross	Ware	1890
Ford, DeSaussure, (V-P., C., P.)	Augusta	Richmond	1857
Foster, Eugene, (V-P., C., P.)	Augusta	Richmond	1875
Fowler, C. C	Rome	Floyd	1891
Freeman, S. H	Lawrenceville	Gwinnett	1891
Gantier, W. T	Columbus	Muscogee	1892
Gaulden, Samuel S.	Quitman	Brooks	1892
Gann, Wm. F	Columbus	Muscogee	1891
Garland, J. T	Hillsboro	Jasper	1889
Gaston, J. McF	Atlanta	Fulton	1884
Gay, D. E	Sidney	Emanuel	1875
Gerdine, John, (C., V-P.)	Athens	Clarke	1882
Gheesling, J. H	Greenesboro	Greene	1891
Goodrich, E. C. (T.)	Augusta	Richmond	1876
Googe, W. R	Abbeville	Wilcox	1892
Goss, I. H	Athens	Clarke	1877
Greene, C. C	Atlanta	Fulton	1887
Greene, J. E	Augusta	Richmond	1886
Goolsby, R. C	Juliette	Monroe	1891
Greene, J. G	Cartersville	Bartow	1879
Green, S. H	Oakdale	Fulton	1892
Griffin, C. F	Cassville	Bartow	1888
Griggs, A. W. (O., V-P., C., P.)	West Point	Troup	1866
Griggs, R. E	Columbus	Muscogee	1892
Griggs, J. W	West Point	Troup	1892
Grimes, George J. (V-P.)	Columbus	Muscogee	1872
Ham, E. P	Gainesville	Hall	1892
Hall, Charles H (C.)	Macon	Bibb	1870
Hall, Harris	Milledgeville	Baldwin	1891
Hallum, J. W	Carrollton	Carroll	1891
Harrington, A. L	West Point	Troup	1892
Hagan, Hugh	Atlanta	Fulton	1892
Harbin, R. M	Calhoun	Gordon	1891
Hardman, L. G	Harmony Grove	Jackson	1877
Hardman, W. B	Harmony Grove	Jackson	1892
Hardon, Virgil O (O.)	Atlanta	Fulton	1886
Harris, R. B	Savannah	Chatham	1885
Harris, N. O	Atlanta	Fulton	1887
Harison, W. H., Jr	Augusta	Richmond	1886
Hart, C. C	Cross Keys	DeKalb	1888
Hatch, M. G. (C.)	Tennille	Washinton	1880

Name.	Postoffice.	County.	Admitted.
Hatchett, J. M	Fort Gaines	Clay	1892
Hawkins, S. B. (V-P., C.)	Americus	Sumter	1871
Hawkins, A. M. F	Ball Ground	Cherokee	1891
Hawes, A. S	Atlanta	Fulton	1891
Head, J. M	Zebulon	Pike	1883
Heard, J. H	Walden	Bibb	1884
Henderson, J. R	Sun Hill	Washington	1884
Herrman, J. D	Eastman	Dodge	1884
Hickman, C. W	Augusta	Richmond	1891
Hill, J. J	Washington	Wilkes	1880
Hillsman, P. L	Albany	Dougherty	1871
Hobbs, A. G	Atlanta	Fulton	1882
Hogg, J. N	West Point	Troup	1892
Holliday, W. Z	Augusta	Richmond	1884
Holmes, J. B. S. (V-P., P.)	Rome	Floyd	1872
Holt, W. F. (V-P., P.)	Macon	Bibb	1867
Hopkins, T. S	Thomasville	Thomas	1865
Hopkins, J. G	Thomasville	Thomas	1890
Howell, Dan. H. (S.)	Atlanta	Fulton	1878
Hudson, P. L	Cochran	Pulaski	1889
Hull, J. M. (V-P.)	Augusta	Richmond	1882
Hummel, George C	Savannah	Chatham	1884
Humphries, W. C	Acworth	Cobb	1890
Humphries, J. R	Acworth	Cobb	1876
Hurt, Charles D	Columbus	Muscogee	1890
Hutchins, M. B	Atlanta	Fulton	1892
Ildton, H. W	Mattie	Dodge	1892
Jarnagin, W. C	Atlanta	Fulton	1882
Jelks, N. P	Hawkinsville	Pulaski	1882
Jefferson, Wesley	Beuna Vista	Marion	1892
Johnson, S. W	Graham	Appling	1888
Johnson, J. C	Macon	Bibb	1875
Johnson, Lindsay (O.)	Cartersville	Bartow	1888
Johnson, A. S	Bowman	Elbert	1891
Johnson, C. Evans	Atlanta	Fulton	1892
Jones, L. H	Clarkston	DeKalb	1887
Jones, Louis H	Atlanta	Fulton	1890
Jones, L. M	Milledgeville	Baldwin	1880
Jones, R. D	Summerville	Chattooga	1892
Jordan, Seth N	Columbus	Muscogee	1892
Keaton, P. H	Damascus	Early	1889
Kelley, J. M	Griffin	Spalding	1885
Kelley, T. J	Tennille	Washington	1884

Name.	Postoffice.	County,	Admitted.
Kendrick, W. S. (O.)	Atlanta	Fulton	1874
Kendrick, R. T	Alapaha	Berrien	1891
Kennedy, L. P	Atlanta	Fulton	1890
Kime, R. R	Atlanta	Fulton	1892
Kenyon, O. T	Weston	Webster	1892
Lallerstedt, T. L	Panola	DeKalb	1868
Lamb, Theodore	Augusta	Richmond	1886
Lancaster, J. F	Forsyth	Monroe	1884
Lane, E. W. (V-P.)	Scarboro	Screven	1885
Lanier, Sidney	Guyton	Effingham	1890
Latimer, C. T	Macon	Bibb	1889
LeHardy, J. C. (T., V-P.)	Savannah	Chatham	1868
Lockhart, V. D	Homer	Banks	1891
Logan, A. J	Roney	Sumter	1882
Love, T. D.	Atlanta	Fulton	1887
Maloy, John K	Milan	Telfair	1890
Mathis, A.	Macon	Bibb	1872
Mathews, W. J	Zetalla	Spalding	1892
Matthews, S. M	Quitman	Brooks	1890
Malone, J. D	Marietta	Cobb	1891
McDonald, C. M	Leesburg	Lee	1892
McKown, J. A	Jonesboro	Clayton	1891
McKown, T. D	Chickamauga	Walker	1887
McHatton, H. (C.)	Macon	Bibb	1883
McIntosh, T. M	Thomasville	Thomas	1874
McMaster, H. B	Waynesboro	Burke	1888
McMillian, J. E	Albany	Dougherty	1890
McRae, F. W	Atlanta	Fulton	1887
Miller, R. L.	Sandersville	Washington	1891
Mitchell, J. W	Hamilton	Harris	1891
Mitchell, Thomas S	Columbus	Muscogee	1892
Miller, G. T	Americus	Sumter	1892
Moore, K. P. (V-P.,O.,T.P.S.)	Macon	Bibb	1871
Mooney, H. R	Ellabell	Bryan	1891
Moreland, A. C	Atlanta	Fulton	1892
Morgan, J. B	Augusta	Richmond	1891
Mobley, H. A	Byronville	Dooly	1891
Mulligan, G. W. (V-P., P.)	Washington	Wilkes	1883
Neal, J. W	Scotland	Telfair	1892
Nicolson, Wm. Perrin	Atlanta	Fulton	1883
Nichols, D. N	Laston	Bullock	1891
Noell, S. G	Ypsilant	Talbot	1892
Noble, G. H	Atlanta	Fulton	1883

Name.	Postoffice.	County.	Admitted.
North, A. G	Milledgeville	Baldwin	1887
Nunn, R. J. (C., V-P., P.)	Savannah	Chatham	1867
O'Daniel, Mark H. (O., C., V-P.)	Macon	Bibb	1882
O'Daniel, William (T., P.)	Bullard	Twiggs	1870
O'Daniel, W. A. (O.)	Milledgeville	Baldwin	1886
Owens, W. W	Savannah	Chatham	1891
Patterson, F. D	Lumpkins	Stewart	1892
Parks, W. B	Atlanta	Fulton	1882
Pattillo, John T	West Point	Troup	1892
Paige, John D	Savannah	Chatham	1892
Pendergrass, J. B	Jefferson	Jackson	1883
Perdue, H	Barnesville	Pike	1889
Perry, Thomas B., U. S. Marine Hosp. Ser.,	Baltimore, Md		1891
Phillips, S. Latimer	Savannah	Chatham	1890
Poland, S. B	Griswoldville	Jones	1891
Poole, W. H	Douglasville	Douglas	1883
Ponder, W. P	Forsyth	Monroe	1885
Powell, T. O. (P.)	Milledgeville	Baldwin	1867
Quarterman, K. A	Walthourville	Chatham	1885
Quillian, H. P	Arp	Banks	1888
Quillian, D. D	Athens	Clarke	1892
Ramsaur, D. H	Rome	Floyd	1888
Read, J. B	Savannah	Chatham	1851
Richardson, C. H	Montezuma	Macon	1886
Richardson, E.H. (O., C., V-P.)	Atlanta	Fulton	1878
Ridley, F. M (O.)	LaGrange	Troup	1887
Ridley, R. B	Atlanta	Fulton	1887
Roberts, J. B. (V-P.)	Sandersville	Washington	1875
Rowland, A. A	Brunswick	Glynn	1890
Roy, G. G	Atlanta	Fulton	1878
Roy, C. D	Atlanta	Fulton	1892
Royal, A. R	Abbeville	Wilcox	1892
Ross, James T	Macon	Bibb	1891
Rumble, S	Goggins	Monroe	1891
Scott, H. F. (O.)	Atlanta	Fulton	1879
Singleton, O. G	Fort Valley	Houston	1892
Sego, J. T	Richmond	Richmond	1885
Selman, J. L	Douglasville	Douglas	1882
Sibbett, W. F	Broxton	Coffee	1890
Simpson, W. T	Smithville	Lee	1892
Simmons, A. B	Savannah	Chatham	1891
Sims, E. H	Columbus	Muscogee	1892

Name.	Postoffice.	County.	Admitted.
Sims, J. C	Columbus	Muscogee	1892
Smith, A. A. (V-P., P)	Hawkinsville	Pulaski	1875
Smith, H. J	Blackshear	Pierce	1887
Solomon, J. C	Flovilla	Butts	1884
Sorrells, R. P	Athens	Clarke	1887
Spence, J. M	Waresboro	Ware	1890
Spier, C. P.	Wadley	Jefferson	1886
Standifer, W. B	Blakely	Early	1886
Stephens, L. P	Atlanta	Fulton	1888
Stewart, J. F	Griffin	Spalding	1892
Stewart, W. W	Columbus	Muscogee	1892
Stevens, V. P	Putnam	Marion	1892
Sterling, W. L	Atlanta	Fulton	1878
Stone, George H	Savannah	Chatham	1875
Stovall, A. S. J	Elberton	Elbert	1886
Strother, William A	Albany	Dougherty	1867
Tate, William B	Tate	Pickens	1890
Taylor, A. P	Thomasville	Thomas	1873
Taylor, J. P	Haralson	Coweta	1859
Taylor, R. H	Griffin	Spalding	1879
Tarver, F. E	Hephzibah	Richmond	1891
Terrell, E. B	Greenville	Meriwether	1891
Terrell, H. W	Columbus	Muscogee	1892
Tinsley, A. S	Augusta	Richmond	1891
Thompson, P. H	Bluffton	Clay	1886
Todd, J. S. (O., C., P.)	Atlanta	Fulton	1872
Toole, J. A	Macon	Bibb	1889
Trimble, G. C	Bullard	Twiggs	1891
Tye, R. L	McDonough	Henry	1887
Usry, F. M	Lombardy	McDuffie	1886
Van Goidtsnoven, E	Atlanta	Fulton	1887
Vanhorne, J. T	Monroe	Walton	1892
Walker, W. F	Dranesville	Marion	1892
Wall, A. A	Beuna Vista	Marion	1892
Walker, J. L	Waycross	Ware	1884
Weaver, J. D	Eatonton	Putnam	1890
Weaver, J. A	Beuna Vista	Marion	1892
Wegefarth, J. A. W	Savannah	Chatham	1891
Westmoreland, W. F. (O.)	Atlanta	Fulton	1886
Whitaker, J. M	Milledgeville	Baldwin	1881
Whitehead, A. G. (V-P., P.)	Waynesboro	Burke	1869
Welchel, John E	Gillsville	Hall	1891

Name.	Postoffice.	County.	Admitted.
Wills, T. J	Danielsville	Madison	1889
Williams, W. P	Waycross	Ware	1890
Williams, H. J. (o.)	Macon	Bibb	1883
Williams, G. B	Tallokas	Brooks	1892
Wilcox, G. A	Augusta	Richmond	1891
Wimberly, W. C	Fort Gaines	Clay	1890
* Winchester, W. R	Macon	Bibb	1889
Wood, W. E	Monroe	Walton	1891
Wright Thomas R	Augusta	Richmond	1880
Young, S. E	Midland	Muscogee	1892

NON-RESIDENTS.

West, G. R	Chattanooga	Tennessee	1888
Gann, Dewell	Benton	Arkansas	1887
Stockton, F. O	Newark	New Jersey	1889

HONORARY LIST.

This list is designed for aged, retired or infirm members of the Association, who are entitled to all the privileges of the Association without the payment of dues.

The Secretary would be obliged to members to report any names that should go on this list.

Name.	Postoffice.	County.	Admitted.
Alexander, J. F. (P., C., V-P.)	Atlanta	Fulton	1849
Bell, A. A	Madison	Morgan	1858
Coleman, J. T	Perry	Houston	1851
Brawner, W. M	Lexington	Oglethorpe	1883
Hollingsworth, W. T	Madison	Morgan	1857
Hoyt, W. D	Rome	Floyd	1871
Leitner, C. B	Columbus	Muscogee	1852
Love, Wm. Abram	Atlanta	Fulton	1866
Miller, H. V. M	Atlanta	Fulton	1851
Powell, T. S. (V-P.)	Atlanta	Fulton	1857
Smith, J. B	Perry	Houston	1870
Beasley, ——	West Point	Troup	1849

In Memoriam.

☞SPECIAL REQUEST TO EVERY MEMBER.—The Secretary *earnestly requests each member of the Association* to aid him *in filling* THE BLANKS in the following Roll of Deceased Members *by making the necessary inquiries* in their respective cities and counties, *and writing him at once* on obtaining the desired information.

Name.	Postoffice.	County.	Admitted.	Died.
Adams, C. B.	Augusta	Richmond.	1868	1875
Alexander, J. R		Floyd	1849	
Alexander, L. B.	Forsyth	Monroe		1891
Alfriend, E. W. (V-P.)	Albany	Dougherty.	1852	1886
Arnold, R. D. (V-P.,P.)	Savannah	Chatham	1849	1876
Ashworth, A. B. (S.)	Atlanta	Fulton	1887	1889
Avery, J. C	Decatur	DeKalb	1859	1873
Baker, A. H	Augusta	Richmond	1876	1891
Ballinger, M. R	Floyd Springs	Floyd	1860	1886
Banks, J. T. (V-P., P.)	Griffin	Spalding	1858	1880
Barkwell, T. J	Hawkinsville	Pulaski	1859	
Barnett, J. W	Raytown	Taliaferro	1880	1890
Battle, H. L	Russellville	Monroe	1849	
Bell, T. W	Busbyville	Houston	1853	
Bignon, H. A	Augusta	Richmond.	1852	1870
Billing, S. A	Columbus	Muscogee	1855	1872
Bizzell, W. D. (V-P.)	Atlanta	Fulton	1882	1890
Black, R. C. (T.)	Augusta	Richmond.	1852	1860
Bomar, B. F	Atlanta	Fulton	1859	
Borcheim, L. E	Atlanta	Fulton	1886	1887
Boswell, S. J. (V-P.)	Columbus	Muscogee	1855	
Bothwell, D. J	Vienna	Dooly	1849	
Bozeman, J. F.	Atlanta	Fulton	1855	1877
Boring, John M. (V-P.)	Atlanta	Fulton	1856	1891
Brandon, D. S	Thomasville	Thomas	1873	1878
Broadhurst, W. W	Augusta	Richmond.	1852	1861
Bruce, R. J	Thomasville	Thomas	1874	1880
Bunn William	Wilna	Houston.	1854	

Name.	Postoffice.	County.	Admitted.	Died.
Burgess, Wm. R. (T., O.)	Macon	Bibb	1870	1878
Burney, S. W. (P.)				1876
Campbell, Robert	Augusta	Richmond	1849	1885
Carroll, J. C	Laurens Hill	Laurens	1857	1870
Carroll, R. C	Augusta	Richmond	1873	1882
Castlen, F. G	Macon	Bibb	1867	1874
Carlton, J. M	Athens	Clarke	1882	1883
Charlton, T. J. (C.)	Savannah	Chatham	1862	1886
Charters, W. M. (P.)	Savannah	Chatham	1851	1883
Chase, D. S	Augusta	Richmond	1852	
Clark, S. B	Rich. Factory	Richmond	1852	
Campbell, H. F. (O. V-P., P.)	Augusta	Richmond	1851	1892
Coe, J. N	Flat Rock	Pike	1856	
Colley, F. S. (P.)	Monroe	Walton	1856	
Cooper, G. F. (O., S., V-P)	Sumter	Americus	1849	1882
Copeland, A. B	Hamilton	Harris	1878	1882
Cornwall, G. H	Hillsboro	Jasper	1854	
Crawford, S. S	Augusta	Richmond	1857	
Crump, E. D	Herndon	Burke	1872	1881
Cumming, H. M	Augusta	Richmond	1862	1887
Cunningham, L. S	Big Creek	Forsyth	1859	1862
Cunningham, W. D	Jasper	Pickens	1859	1866
D'Alvigney, N	Atlanta	Fulton		1877
Davenport, C. W	Point Peter	Oglethorpe	1852	
Davenport, H. S	Calhoun	Gordon	1859	
Davis, W. L	Albany	Dougherty	1849	
Dean, S. H	Conyers	Rockdale	1856	
Dearing, W. E	Augusta	Richmond	1852	1867
DeCortez, C. A	Savannah	Chatham	1872	
Dickinson, J. T	Albany	Dougherty	1857	
Dick'son, R. Q. (V-P., P.)	Albany	Dougherty	1850	
Dobbins, W. O	Fort Gaines	Clay	1883	1890
Dugas, L. A. (P.)	Augusta	Richmond	1852	1884
Dupree, L. J	Camilla	Mitchell		
Eve, Jos. A	Augusta	Richmond	1852	1886
Eve, S. C	Augusta	Richmond	1868	1884
Felder, W. L	Augusta	Richmond	1857	1867
Fish, J. D. (T.)	Savannah	Chatham	1875	1879
Fitzgerald, E	Macon	Bibb	1882	1885
Ford, L. D. (P.)	Augusta	Richmond	1849	1884
Fort, Moses T	Hawkinsville	Pulaski	1859	1878
Franklin, M. A	Macon	Bibb	1849	1858
Frazier, W. M	Hawkinsville	Pulaski	1850	
Gaither, Henry	Oxford	Newton	1851	

Name.	Postoffice.	County.	Admitted.	Died.
Gaither, B. T	Oxford	Newton	1852	1853
Gardner, J. W	Augusta	Richmond	1857	
Girardy, Edward	Augusta	Richmond	1852	1859
Gordon, J. M	Savannah	Chatham	1849	
Gray, James A. (S.)	Atlanta	Fulton	1882	1887
Gray, S. H	Barnesville	Pike	1871	1885
Green, A. B	Pond Town	Sumter	1849	
Green, H. K	Macon	Bibb	1849	1867
Green, Thomas F	Milledgeville	Baldwin	1849	1879
Gregory, J. D		Sumter	1849	
Grimes, T W	Columbus	Muscogee	1855	1882
Habersham, J. C	Savannah	Chatham	1853	
Habersham, J.C.Jr. (V-P)	Savannah	Chatham	1866	1881
Habersham, S. E	Eatonton	Putnam	1870	
Hammond, D.W. (V-P., C)	Macon	Bibb	1857	1887
Harden, W. P	Harmony Grove	Jackson	1852	1885
Harrell, W. J	Bainbridge	Decatur	1874	1881
Harris, S. N. (V-P.)	Savannah	Chatham	1851	1854
Harrison, Gabriel	Macon	Bibb		1862
Harris, Juriah (O., V-P.)	Savannah	Chatham	1852	1876
Havis, M. W	Perry	Houston	1854	1890
Hart, A. C	Waynesboro	Burke	1852	
Hawes, E. C	Appling	Columbia	1862	
Heard, T. O	Griffin	Spalding	1867	
Hendrick, J. B	Covington	Newton	1857	1881
Henry, G. C	West Point	Troup	1872	
Hook, E. B	Augusta	Richmond	1857	1862
Houston, J. P. R	Savannah	Chatham	1873	1892
Hoxey, Thomas	Columbus	Muscogee	1849	1853
Holmes, G.W. (V-P., P., C)	Rome	Floyd	1867	1890
Holmes, T. M. (O.)	Rome	Floyd	1883	1891
Hamilton, J. L	Stone Mountain	DeKalb	1859	1890
Hunter, E. H. W	Louisville	Jefferson	1857	1883
Ingraham, E. P	Albany	Dougherty	1870	1873
Irvine, Robert	Augusta	Richmond	1880	1881
Johnson, C. W	Macon	Bibb	1870	1875
Johnson, John M	Atlanta	Fulton	1866	1886
Jones, B. O	Atlanta	Fulton		
Jones, J. W	Atlanta	Fulton	1857	1871
Kennebrew, Henry	Athens	Clarke	1883	1886
Kirkscey, E. J. (V-P.)	Columbus	Muscogee	1871	1877
Kollock, P. M. (P.)	Savannah	Chatham	1852	1872

Name.	Postoffice.	County.	Admitted.	Died.
Lamar, T. R. (V-P.)	Macon	Bibb	1849	1859
Lightfoot, W. S	Macon	Bibb	1849	1864
Lackhart, R. H	Columbus	Muscogee	1855	1859
Lattimer, C. T.	Macon	Bibb	1889	1889
Lawrence, L. L	Blountsville	Jones	1889	1890
Long, Crawford W.	Athens	Clarke	1849	1878
Longan, J. P. (P.)	Atlanta	Fulton	1858	1891
Lumpkin, George	Maxey's Depot	Oglethorpe.	1859	
Lumpkin, S. P.	Watkinsville	Clarke	1859	
Mackie, J. D.	Augusta	Richmond.	1852	1854
Maffit, R. G. W	Dalton	Whitefield.	1859	
Mathews, W. B	Fort Valley	Houston	1884	1885
McBride, W. G	Oconee	Wash'gton.	1850	1873
McDowell, J. M	Barnesville	Pike	1887	1891
McGolrick, R	Macon	Bibb	1849	1853
McKinley, C. A	Newnan	Coweta	1859	
McMillan, J. E	Columbus	Muscogee.	1872	1883
Means, A. (V-P.)	Oxford	Newton	1851	1883
Means, O. S	Oxford	Newton	1857	
Meiere, William S	Madison	Morgan	1857	
Milam, R. J	Fairburn	Campbell.	1882	1882
Morrison, D. H	Savannah	Chatham	1868	1869
Musgrove, W. C. (C., S.)	Midville	Burke	1849	1876
Nash, R. A	Marion	Twiggs	1849	
Nisbet, R. H.	Eatonton	Putnam	1854	1873
Nottingham, C. B (S., T., C., P.)	Macon	Bibb	1849	1875
Nunn, R. M	Savannah	Chatham	1871	1873
Ogilby, H. J. (V-P.)	Madison	Morgan	1849	1873
O'Keefe, D. C. (S.)	Atlanta	Fulton	1852	1871
Orme, L. H. (S.)	Atlanta	Fulton	1866	1872
O'Sullivan, ——	Cork	Lee	1849	
Owen, J. D		Baldwin	1850	
Parsons, J. M	Russellville	Monroe	1845	
Pitts, G. W	Star	Butts	1859	
Posey, J. F.	Savannah	Chatham	1851	
Pringle, W.	Covington	Newton		
Ragan, Ishman H.	Palmyra	Lee	1856	
Raines, Thomas	Atlanta	Fulton	1872	1883
Raines, T. L.	Atlanta	Fulton	1882	1884
Rauschenberg, Christ'n.	Atlanta	Fulton	1861	1878
Richardson, C. P.	Savannah	Chatham	1851	1853
Ridley, R. A. T. (V-P.)	LaGrange	Troup	1859	1871

Name.	Postoffice.	County.	Admitted	Died.
Robertson, J. J	Washington	Wilkes	1852	1872
Roddy, R. L. (V-P.)	Forsyth	Monroe	1849	1878
Ruffin, W. R	Augusta	Richmond	1852	
Russell, W. J	Lawrenceville	Gwinnett	1861	
Ryan, T. D. L	Hawkinsville	Pulaski	1859	1876
Stafford, S. J	Madison	Morgan	1856	1859
Searcy, D. B	Bolingbroke	Monroe	1849	1885
Shropshire, J. W			1871	
Simmons, J. N	Atlanta	Fulton	1850	1871
Simmons, J. S	Gainesville	Hall	1873	1881
Simmons, S. B	Augusta	Richmond	1852	1867
Simmons, T. A	Irwington	Wilkinson	1871	1872
Slaughter, J. T	Villa Rica		1859	1889
Smith, A. D	Montezuma	Macon	1871	
Smith, C. W	Jonesboro	Clayton	1859	
Smith, Hiram	Augusta	Richmond	1876	1888
Smith, H. H	Augusta	Richmond	1886	1887
Smith, R. M. (C.)	Athens	Clarke		1879
Smith, Thomas	Savannah	Chatham	1858	1876
Spier, W. A	Grantville	Coweta	1859	
Stallings, J. D	Preston	Webster	1871	
Stanford, F. A	Columbus	Muscogee	1849	1885
Starr, E. P	Savannah	Chatham	1868	1873
Steele, H	Knoxville	Crawford	1849	
Steele, R. T	Fairburn	Campbell	1849	
Steiner, H. H	Augusta	Richmond	1857	1892
Stephens, W. B	Forsyth	Monroe	1849	
Stewardson, Thomas	Savannah	Chatham	1849	
Stozier, L. L	Albany	Dougherty	1867	
Sutton, C. B		Lee	1856	
Taliaferro, V. H. (V-P.)	Atlanta	Fulton	1857	1887
Taylor, E. T	Columbus	Muscogee	1855	
Taylor, R. N	Hawkinsville	Pulaski	1850	
Thomas, J. G. (V-P., P., C., T.)	Savannah	Chatham	1867	1885
Thompson, Charles	Macon	Bibb	1849	1854
Trammell, A. A	Forsyth	Monroe	1856	
Tucker, O. W	Brunswick	Glynn	1890	1891
Underwood, J. B	Cave Spring	Floyd	1860	1881
Van Meter, J. N	Euharlee	Bartow	1879	1881
Wall, W. W	Calhoun	Gordon	1860	
Walker, T. F	Cochran	Pulaski	1859	1888
Walker, F	Macon	Bibb	1889	1891

Name.	Postoffice.	County.	Admitted.	Died.
Ware, A. E. O.			1859	
Waring, J. J	Savannah	Chatham	1853	1888
Watson, W. A	Jefferson	Jackson	1883	1889
Wells, C. H	Savannah	Chatham	1853	1854
Wells, W. B.	Chattanooga	Tennessee	1873	1891
West, Charles (P.)	Perry	Houston	1849	
West, C. W	Savannah	Chatham	1853	1859
Westmoreland, W.F. (P.)	Atlanta	Fulton	1856	1890
White, S. G. (V-P.)	Milledgeville	Baldwin	1868	1877
Whitlock, Isaac W	Washington	Wilkes	1852	1853
Wile, Henry	Atlanta	Fulton	1886	1887
Wiley, J. B	Macon	Bibb	1849	
Williams, T. L		Dooly	1849	
Williams, W. L.	Fayetteville	Fayette	1873	
Willingham, Willis	Lexington	Oglethorpe	1849	1872
Winn, G. A	Bolingbroke	Monroe	1849	1862
Wirsen, G. F	Rutledge	Morgan	1871	1884
Woodson, C. T	Wilna	Houston	1854	
Wooten, W. H	Lexington	Oglethorpe	1852	1860
Word, T. J	Rome	Floyd	1887	1890
Word, R. C	Atlanta	Fulton	1855	1890
Wragg, J. A	Savannah	Chatham	1853	
Wright, P. H	Macon	Bibb	1869	1888
Yonge, Easton	Savannah	Chatham	1880	

Dr. Joseph Payne Logan.

Dr. Joseph Payne Logan was born in Botetourt county, Virginia, on November 9, 1821. He came of an extensive and highly respectable family. His father, the Reverend Joseph D. Logan, was a Presbyterian minister. The Doctor passed his boyhood in a home where all the influences were favorable to intelligence and virtue, and to these doubtless is due, in a large degree, the noble manhood of his later life. He received his college training at the Washington-Lee University, then known as the Washington College. He attended for some time a medical school in Richmond, Va., and afterwards became a student in the Medical Department of the University of Pennsylvania, from which latter institution he was graduated in 1841. For some twelve years he resided at a country home in his native State, and united the business of a farmer with the profession of a physician. During this period he was married to Miss Anna Eliza Paunill. In 1854 he went to reside in Atlanta, Georgia. He was then a man strikingly handsome in appearance, most engaging in his manners, stainless as to character, and an experienced and accomplished physician. His merits met immediate recognition and he entered upon a career of marked and honorable success. He soon came to enjoy, and retained throughout his long life, a large, select and lucrative practice. His exalted character, his professional skill, and his loyalty and devotion to his patients made them his sincere and enthusiastic friends. As an enlightened, public-spirited and useful citizen, he enjoyed the esteem of the community in which he lived. He was a member of the Presbyterian Church, and for many years an Elder therein, and always gave the cause of religion a hearty support.

When the war between the States came on, Dr. Logan accepted an appointment as a Confederate surgeon, and in that capacity, and as a medical director, he served till the restoration of peace. In 1866 he removed to Baltimore, where he became a professor in a medical college. He returned to Atlanta in 1869, and continued to reside there till his death, which took place on June 2, 1891. During a considerable period the Doctor was a member of the faculty of the Atlanta Medical College and editor of the *Atlanta Medical and Surgical Journal.* As a member of the State Board of Health, he prepared valuable reports on small-pox and yellow fever.

Of the marriage, which has been mentioned, there were born to Dr. Logan six children. Of these two died in infancy. His

only son, Joseph P. Logan, Jr., died when twelve or fourteen years of age. Two others of his children died after attaining maturity, but without marriage. His daughter Nannie married Captain John Grant, lately president of the Texas Pacific railroad, and a son of Colonel Lemuel P. Grant, of Atlanta. She died a number of years since, leaving one child, Laura Lee Grant, who is the Doctor's only descendant.

The death of Mrs. Logan, which occurred nine years ago, left the Doctor entirely alone. On June 23, 1887, he was married to Miss Alice B. Clarke, of Atlanta, a sister of Judge Marshall J. Clarke.

To this imperfect sketch are added two conceptions of Dr. Logan, one taken from the sermon delivered on the occasion of his death, by Rev. Dr. Strickland, the other from the pen of Col. I. W. Avery, who was one of the Doctor's closest friends:

"Dr. Logan took a serious view of life. He was amiable, indeed, affectionate, cheerful, happy in his family, in his friends, and in the great work of relieving the suffering, to which so many years of his life were so successfully devoted. Yet anything like frivolity, or thoughtlessness, or indifference to the great subjects of divine revelation, was far from him. He had a profound sense of the responsibilities of life; of the infinite interests at stake. And he was right. Hardly anything in the universe is more serious than the lives we are now living. Every important religious duty connected with them is serious. Prayer is a serious duty; and faith and repentance and consecration, they are thoroughly serious duties; and Dr. Logan felt that he could not daily perform them as he ought without much of the seriousness that belongs to them. It was this seriousness that gave to his character that purity, that gravity, that elevation, that strength that all who knew him so much admired. If we would have characters like his, we must look at life as he did.

"He was a man of profound religious convictions. He did not simply hold certain views in regard to God, and the inspiration of the Scriptures, and the divinity of Christ, and the atonement, and the future destinies of the righteous and the wicked, that he regarded as probably true, but on all these subjects he had the clearest and strongest convictions. He was as certain of the Divine origin of the Scriptures and of their great doctrines, as he was of anything that rests on evidence. This gave to his character a solidity and stability and imposing massiveness and strength that attracted the attention of all who had the pleasure of his acquaintance.

"Strength of religious character can come only from strength

of religious convictions. To the extent that we have doubts, our characters are weak and vacillating, and uninfluential for good.

"Dr. Logan was characterized by strong religious principles. Religion with him was not a matter simply of profession, or church connection, or sentiment, but a matter of truth and right and duty. He always wanted to know what the Scriptures taught; what God required. He felt that it was only as religion wrought the principles of righteousness and truth into the very texture of the character, that it accomplished any saving good.

"As might have been expected, the end was peace; peace with himself and peace with God; peace in 'a good hope through grace of everlasting life.' 'Mark the perfect man, and behold the upright, for the end of that man is peace.'"

[From Atlanta Medical and Surgical Journal.]

"Dr. Logan was a great physician, a noble man, and genuine Christian. Like the pastor, the doctor deals with the spirit, but unlike him, heals the body, mingling two sacred missions. Dr. Logan blended physical healing and Christian comforting in a marvelous degree. His sympathy was as gentle as his science was skilled. He had a remarkable patience and subtlety in reading ills and an extraordinary grasp of cure. He was a born doctor by mind and temperament. He had natural medical genius. His strong native intuitions in healing were fortified by the largest culture in medical science. He had a face and form that typified his noble nature. He was a strikingly handsome and imposing man of majestic proportions and carriage, and a head and countenance benignant and comely. He was a rare character, strong yet pure, manly and gentle, proud though tender, able and pious. He had an enormous practice in Atlanta, and it is doubtful if any of its citizens ever shared more widely in the sorrows of its good people; was ever linked more closely to its sacred memories, or will be more regretted than Dr. Logan. He was a pious member and efficient elder in the Central Presbyterian church. He was a wise and successful business man and the soul of integrity. He was full of charity and public spirit."

W. B. Wells, M. D.

BY P. D. SIMS, M. D.

Dr. Wells was born on a farm in Habersham county, Ga., on the 8th of June, 1838. When he was seven years old his father, with the family, moved to Walker county in the same State. Here he lived to manhood, working on his father's farm, and receiving such education as the common schools of the county afforded. At the age of 22, in 1860, he began the study of medicine in the office of Dr. Clements, a country practitioner of that county. In the midst of this preparatory training came the troubles of the war between the States. He attended one course of lectures in Atlanta, and in the summer of 1862 entered the Confederate army in the capacity of assistant surgeon to the Eighth Georgia Battalion. In this capacity he served to the close of the war.

Finding himself then in common with his late comrades in arms, wholly without means, and no one to come to his relief, he resolutely determined to prosecute his professional studies, but necessity compelled him to engage for a time in practice before completing his course; and for this purpose he located at Red Clay, Georgia.

In 1866 he took a second course of lectures, graduating in the Atlanta Medical College.

He continued at Red Clay in an active and increasing practice until the spring of 1885, feeling the stimulus of unsatisfied ambition, desiring a larger and more useful field, and after taking a post-graduate course at the Polyclinic, in New York, he located in Chattanooga, where he remained in a laborious and constantly increasing practice to the time of his last sickness, in November, 1890, which ended in his death, December 16, 1890.

In January, 1867, he was married to Miss Mollie E. Pope, who, with three children, survives him.

He was stricken down in the midst of apparent vigorous manhood, when life seemed most propitious, and when his usefulness to his race and to his profession seemed but fairly commenced.

Few men are more devoted to the profession than was he—remarkably few so ready at all times and under all circumstances to respond to its exacting demands, and to undergo its arduous labors.

Fleetwood Walker, M. D.

The subject of this sketch was born in the county of Jasper, State of Georgia, on the 15th day of June, 1837, and died in the city of Macon, January the 29th, 1891.

His father, Henry Walker, was a planter in Jasper county of considerable estate, and was a man of unusual strength of mind and character. He was a strong believer in education, and a staunch supporter of educational enterprises.

Choosing the profession of medicine, young Walker was sent to the University of Pennsylvania at Philadelphia, where he graduated in the year 1858. Returning to his home, he located in the town of Monticello, and began to practice his profession in partnership with Dr. Thomas C. Davis, a leading physician of that place, and was from the start, very successful and popular, and soon gained and enjoyed the patronage and confidence of the people.

When the war between the States broke out, he enlisted with the Jasper Infantry as Second Lieutenant, and went with the company to join the army of Virginia; and, after serving as such for a short time, was appointed Surgeon of the Fourteenth Georgia Regiment. From the writer's personal knowledge, Dr. Walker was regarded as one of the very best young surgeons in the army. Always at his post of duty, disregarding the shot and shell of the enemy, he was found close to the line of battle—at the post of honor, ready to minister to the wounded and the dying. He was a man of quick perception, fine judgment, and great decision of character—three important characteristics of an efficient surgeon. While he was sympathetic and tender with his subjects, he promptly placed the knife wherever most needed, and would without a quiver, sever a leg or an arm, or both from the body, while others less judicious and courageous, might have hesitated.

In 1863, Dr. Walker was transferred from the field, and was assigned to duty in the city of Macon, Ga., having charge of an hospital; and there remained on duty until the war ended, when he returned to his old home, and resumed the practice with Dr. W. D. Maddox, of Monticello. In November, 1865, he was married to Miss Lucy A. Burney, of that town, a daughter of General John W. Burney, a distinguished citizen. After practicing some years, his health gave way and he was forced to leave off his practice, temporarily. He went to the country and lived on his farm, engaging in agricultural pursuits, and was quite successful and enterprising. Being popular with the

people, he was elected to the Legislature in 1880, and served with marked influence two sessions. In January, 1884, he removed to Macon, and again returned to his much loved practice. Here, as elsewhere, his personal magnetism, his great energy, ability and devotion to duty, bore fruit; for, in one short year, he became one of the most popular men of his profession, and was especially so with his brother physicians, whose confidence and respect he enjoyed in the highest degree; nor was he less beloved by the poor.

He was elected city physician in 1885, and, after serving some years, declined re-election. He was then offered and accepted the chairmanship of the Board of Health, which position he held and filled to the entire satisfaction of the people, and with honor to himself, until the time of his death. In the death of Dr. Walker the city and the community lost, in the very prime of his manhood and usefulness, one of the best of men and most efficient officers. The writer has known Dr. Walker from early boyhood, and was for many years his neighbor and his intimate friend. His was a magnetic nature. His purposes and aspirations were to do good. They were high and noble and fixed. He was courageous, firm and faithful to every friend and to every trust. He dreaded entanglements of any kind, and was cautious and wise in avoiding them, prompt, ready and active in reconciling differences between others—indeed, he possessed, in a very high degree, all the characteristics of a great mind and heart, and practiced with a fervent and sincere interest their promptings. He was not a member of any Christian church, but he was a practical Christian, "going about doing good." "He believed in the power of kindness and spanned, with divine sympathy, the gulf that separates the fallen from the pure." He was beloved because he was frank, candid, sincere and honest; because he looked with eyes of charity upon the failings and mistakes of others. But he has gone, and we must leave him now—

> "Gone from his task half complete,
> Gone from caresses kind and sweet;
> Gone upon the eternal shore—
> Gone forevermore."

Dr. Walker died, as stated, on the 29th of January, 1891, after one short week of illness. Exposing himself to the dreadful weather, nights and days, during the great plague of the city, la grippe, he contracted pneumonia, of which he fell a victim with the rest.

James Proctor Screven Houstoun, M. D.

BY WM. F. AIKEN, M. D.

In the death of Dr. J. P. S. Houstoun, which occurred at Savannah, January 29th, 1892, the medical fraternity of Georgia lost a most talented and noble fellow-worker.

James Proctor Screven Houstoun was born at Tallahassee, Fla., November 3, 1847, being the son of Edward McQueen Houstoun and Claudia Bond, and a lineal descendant of Sir Patrick Houstoun, baronet, one time president of the Upper House of Assembly and member of the King's Council. In the year 1869 he took the degree of Doctor of Medicine at the University of Pennsylvania, and immediately thereafter entered upon the practice of his profession in the city of Savannah, where he married Sarah, daughter of Wallace Cumming, Esq., who, together with four children, survive him.

During the yellow fever epidemic of 1876, he labored unremittingly among the poor and distressed, sowing the seed of a painful malady which ultimately ended in his death, and gaining but little more material compensation for his work than the gratitude of those to whom he brought help in their need. Toward the close of the epidemic he fell a victim to the disease, and was, subsequently, left with a chronic ailment, the sufferings of which only served to bring out in stronger relief the Christian virtues of the man.

While seeking to regain his lost health, he spent two years abroad, and there laid a thorough foundation for the practice of ophthalmology and otology, to which he later limited himself. In the practice of his profession and in his every-day contact with the world, he attracted to him many friends by virtue of a peculiarly kindly nature and a simple unostentatious sympathy which he possessed in a marked degree. Naturally a public-spirited man, he connected himself with general public institutions—charitable and otherwise, being physician to the Savannah Hospital, the Abraham's House, and the Georgia Infirmary, of which latter he was also one of the directors. He was also Professor of Physiology in the Savannah Medical College, Surgeon to the Savannah Volunteer Guards, member of the Georgia Medical Society of Savannah, and of the Georgia State Medical Association.

A prominent member of the Presbyterian Church and of the Young Men's Christian Association, of which he was at one time president, he exemplified in his life the religion of good works rather than of creeds, leaving a name which will be long

revered by the poor in Savannah. Possessed of a childlike purity of character, in which no uncleanness could take root, of a faith and trust in his Creator, which even the certain knowledge of impending death failed in any way to disturb, he endured much and died mourned as a devoted husband and fond parent, and lamented as a physician and a friend.

Dr. Henry Hegner Steiner.

BY GEO. A. WILCOX, M. D.

Dr. Henry Hegner Steiner died at his home, in Augusta, Ga., February 13th, 1892, in the 76th year of his age, after an illness of nearly four years.

He was a surgeon of rare ability, and one of the most distinguished physicians who ever lived in the South.

Born in Frederick City, Maryland, in 1816, he was sent early to college, and graduated in medicine at the University of Pennsylvania, at Philadelphia, in 1838, where he practiced his profession for a short time, and then entered the U. S. Army, as Assistant Surgeon, in June, 1839. He was soon ordered to Fort Gibson, Ark., and attached to the Eighth Regiment Infantry. With this regiment he went to Florida in 1841, and served through the Seminole War with Gen. Wm. North. From 1843 to 1845 he was stationed at the U. S. Arsenal, on the Sand Hills, near Augusta, and here commenced his association with our people, that led six years later to his resignation from the army, and his establishment as a citizen.

Dr. Steiner served with distinction through the whole of the Mexican War, in the First Artillery, and on the staff of Gen. Zach. Taylor. He was present at all the principal engagements, and his skill and devotion was recognized throughout the whole army. His sympathetic tenderness was proverbial, and his success in diagnosis and treatment of obscure cases was wonderful. His work was done in the simplicity of a Christian spirit, and the humblest of his enemies, as the greatest amongst his friends, received alike his kindly ministrations.

In 1851, Dr. Steiner resigned his commission and came to live in Augusta. It has been truly said of him, that there was no one whose counsel was so often sought, and whose advice was so gladly followed in matters relating to the welfare of the community, both in church and state.

Standing as he did, in intimate personal relations to so many prominent families as physician and friend, his position was a

peculiar one, and his influence unbounded. Dr. Steiner was always averse to holding public office, as he might have done many times. He was for a number of years, and at the time of his death, a regular member of the Medical Association of Georgia, and was a strong authority in the advisory boards of several charitable institutions.

In all his relations in life there shone the rich, strong, manly expression of the whole round Christian character, such as can only be built up by every day practice. Charitable and conscientious, he did good everywhere, not upon a calculation of interest, but in the confidence of freedom, and in a frank and fearless spirit.

The world is the better for the pure life he lived in it, and his memory is a priceless legacy to his friends.

"Such are the men whom Aiōn saw, sole contemporaries of an eternal world."

Minor W. Havis, M. D.

Dr. Havis was born in Winnsboro, S. C., April 23, 1829. His ancestors who were of Welsh and English birth, came to America about the middle of the eighteenth century and settled in South Carolina. Both his grandfathers figured conspicuously in the Revolutionary war. His father, Jesse D. Havis, was born in South Carolina in 1798. About 1836 he removed to Chambers county, Ala., where he lived until 1843, when he removed to Perry, Houston county, Ga., where he died in 1876.

Dr. Havis was educated in Alabama and Georgia, and finished his education in Macon, Ga., in 1846. He then began the study of medicine and graduated at the Jefferson Medical College at Philadelphia in 1851.

In the same year he commenced the practice of medicine in Houston county, Ga., and removed to Perry, in the same county, in 1857, to continue his practice. He married there Mrs. Argenta A. Riley. In 1861, at the breaking out of the civil war, he joined the Confederate army as sergeant in Company C of the First Georgia Regiment of Volunteers, and served wilh that command until 1862, when the regiment disbanded. Soon afterwards, in 1862, he joined Palmer's Artillery as first lieutenant, and in November, 1862, was promoted to be captain of the company and served in that capacity until the close of the war. He then returned to Perry and resumed the practice of medicine, and was constantly engaged in the same until the time of his death. He was one of the leading

practitioners in Southwest Georgia, and has been a member of the Medical Association of Georgia since 1852.

He was a perfect gentleman, chivalrous and patriotic, liberal to a fault and the life of the social circle. He was a deacon of the Presbyterian church. In politics he was an uncompromising Bourbon Democrat and a devotee to the Old South.

Dr. Havis died at Perry, Ga., November 26, 1889, sixty years old, regretted by all. The cause of his death was a gunshot wound in the abdomen, inflicted by the accidental discharge of a revolver in the hands of a young man who was examining the pistol.

Dr. Clement T. Latimer.

BY J. T. CONCORD.

Dr. Latimer was born in Laurens county, S. C., August 18, 1840. His parents, Edmund F. and Eliza (Arnold) Latimer, both natives of South Carolina. Our subject was educated in the Ferman University at Greenville, S. C. He attended the Georgia Medical College at Augusta, Ga., graduating therefrom in the class of 1861. He practiced a few months before the war opened. He enlisted in the fall of 1861 in the Forty-seventh Georgia Infantry, and took part in the battle on James' Island, Jackson, Miss., besides many skirmishes. He was on his way to Vicksburg when it surrendered. He went from Jackson to Chattanooga and was in all the battles from there to Peachtree Creek, when the brigade (Jackson's) was sent to Charleston, where they engaged in a fight on John's Island and several more on the Charleston & Savannah Railroad. He was in the medical department from the time he left Mission Ridge until the close of the war. He was in all the battles of his command and surrendered with Johnston.

After the war, he began practice at Blackshear, Ga., in 1866, and continued in that section until the fall of 1881, when he removed to Eastman. He was married in 1867 to Miss Nancy E. Knoles, of Pierce county, and had six children. The Doctor was a member of the Masonic Order, Chapter and Knight Templar. Both parents were members of the Methodist church. The Doctor was a gentleman, than whom no one in the county stands higher in the profession. He was well informed, courteous, and had many friends.

His death occurred in Macon, Ga., August 12, 1890, which caused many hearts to weep for the beloved brother.

Henry Frazer Campbell, A. M., M. D.

Dr. Henry Frazer Campbell was born in Savannah, Ga., February 10, 1824. His father, James Colgan Campbell, was born in County Antrim, Ireland, and belonged to a family of the Presbyterian Scotch-Irish Campbells. His mother, Mary R. (Eve) Campbell was the only sister of Prof. Jos. A. Eve, formerly of Augusta.

Dr. Campbell, after having received an academic education, began the study of medicine at the age of 15, and in March, 1842, when only 18 years of age, he was graduated Doctor of Medicine from the Medical College of Georgia. Immediately after graduating, he established himself in his profession in Augusta, where he continued to reside and practice his profession during his entire life, with the exception of the years from 1862 to '65, when he was surgeon in the army of the Confederate States of America at Richmond, Va., and one year just at the close of the war, when he was Professor of Surgery in the New Orleans School of Medicine.

Of Dr. Campbell it may be said, he was one of the most *useful* men to the profession that this age has produced. To appreciate what a busy man he was and to what extent we are his debtors, we merely have to glance at the large list of medical articles from his pen. With it all he was one of the most modest men that ever lived, and always deprecating his true worth. There was probably rarely a case that came into Dr. Campbell's hands from which he did not learn something, even to the end of his career. And this imbibition of knowledge from the simplest cases, was always of value to him and through him to the profession at large, for the drawing of his conclusions and building up of his theories was due to the storing away in his big brain all the little experiences of everyday professional life.

Dr. Campbell was a most valuable member of our Association. In his early life he was a constant attendant upon its meetings, and it was only the great pressure of professional duties in his later years that kept him away. He was an exceedingly popular member and the highest offices in the gift of the Association were not too great for him. He held consecutively the offices of Orator, Vice-President and President. And during all the years of his membership he rarely if ever failed to come to the meetings, and with a valuable paper ready, "cocked and primed" to argue and discuss the papers of others. Dr. Campbell was always appreciated by his brother

practitioners, and called upon by them to occupy posts of honor.

During the late war he was medical director of the Georgia Military Hospitals at Richmond, Va., and a member of the Army Medical Examining Board of the Confederate States; he was a member of the American Medical Association, was vice-president in 1858, and 1885 president, elected at the meeting in Washington, D. C.; member of the Medical Association of Georgia, and elected its president in 1871; a member of the American Public Health Association, and vice-president in 1880; a member and one of the founders of the American Gynæcological Society; member and vice-president of the American Surgical Association; president of the Augusta Library and Medical Society in 1878; a correspondent of the Academy of Natural Sciences of Philadelphia, elected 1858; corresponding member of the Imperial Academy of Medicine of St. Petersburg, Russia, elected 1860; elected in 1878 foreign corresponding member of the Medical Society of Sweden; member of the State Board of Health of Georgia; elected member of the Abingdon Academy of Medicine in 1879; elected in 1882 an honorary member of the American Academy of Medicine.

Any sketch which omitted to mention the discovery of the excito-secretory system of nerves by Dr. Campbell would do him great injustice. Three years after his discovery, the great English physiologist, Marshall Hall, announced through the London *Lancet* that he had discovered this system. Upon reading Dr. Hall's paper, Dr. Campbell promptly presented him with copies of his publications several years preceding that of Dr. Hall. Dr. Hall, immediately by letter to Dr. Campbell and through the medical press, withdrew his claim and awarded the credit to Dr. Campbell. He said: "It would be unjust to deny that Dr. Campbell has the merit of having first called attention to the excito-secretory system in the year 1850, and that he imposed this very designation in 1853. So far, Dr. Campbell's claims are undeniable, and we would say *palmam qui meruit ferat.*" An examination of the vast number of contributions which he has made to medical science attests the versatility of his genius, and points to the enthusiasm of the scientist.

The following list presents most of the professional contributions from the pen of Dr. Campbell, *i. e.:* "Abortive Treatment of Gonnorrhœa," *Southern Medical and Surgical Journal*, January, 1845; "Abuse of Diuretics," *Ib.*, 1845; "Observations on Cutaneous Diseases," *Ib.*, August and October, 1845, and

August, 1847; "Infantile Paroxysmal Convulsions, Their Identity with Intermittent Fever and Their Treatment with Quinine," *Ib.*, October, 1849; "Dentition in Producing Disease (Reflex-Secretory or Vasso-Motor Action)," *Ib.*, June, 1850; "Epidemic Dengue Fever," etc., *Ib.*, January, 1851; "Law Governing the Distribution of Striped and Unstriped Muscular Fibre," *Ib.*, March, 1851, and *Transactions American Medical Association, Vol. IV.;* "Injuries to the Cranium in Their Relation to Consciousness," *Southern Medical and Surgical Journal*, 1851; "Bilateral Lithotomy," *Ib.*, August, 1851; "Unusual Form of Fever and Dysentery," *Ib.*, 1851; "Report on Surgery," *Transactions Medical Association of Georgia*, 1852; "The Nature of Typhoidal Fever," etc., *Transactions American Medical Association*, May, 1853; "The Sympathetic Nerve in Reflex-Phenomena. A Question of Priority of Announcement with M. Claude Bernard," etc., *Ib.*, May, 1854; "Strangulated Ventral Hernia During Pregnancy," *Southern Medical and Surgical Journal*, January and March, 1857; "Chemical Lecture on Traumatic Tetanus," *Ib.*, February, 1857; "Meckel's Ganglion," etc., *Southern Medical and Surgical Journal*, February, 1858; "Classification of Febrile Diseases by the Nervous System," *Transactions American Medical Association*, 1857; "The Nervous System in Febrile Diseases, Excito-Secretory or Reflex Vasso-Motor Action, the Basis of Their Phenomena," *Ib.*, 1858; "The Secretory and Excito-Secretory System," *I Vol.*, 8 *vo.*, *p.* 135, *Lippincott*, Philadelphia, 1858; "Caffeine as an Antidote for Opium," *Southern Medical and Surgical Journal*, May, 1860; "A New Ready Method. Artificial Respiration in the Sitting Posture," *Ib.*, May, 1860; "Croup, a Paroxysmal Neurosis. Its Treatment with Quinine," *Ib.*, 1860; "The Effect of Caffeine upon the Muscular System," *Ib.*, 1860; "The Georgia Military Hospitals of Richmond," pamphlet, Augusta, Ga., 1861; "Traumatic Hemorrhage and the Arteries," etc., a chapter in the *Confederate Manual of Military Surgery, I Vol.*, 12 *mo.*, *p.* 297, Richmond, 1863; (in this chapter the principle of ligating the main arterial trunk of a limb, for the cure of inflammation and gangrene, is announced); "The Hunterian Ligation of Arteries in Destructive Inflammation," *Southern Journal of Medical Sciences*, New Orleans, August, 1866; "Inflammation," *Cooper's Surgical Dictionary*, London, 1872; "Position, Pneumatic Pressure and Mechanical Appliance in Uterine Displacements," etc., *Atlanta Medical and Surgical Journal*, June, 1875; "Registration and Sanitation," *First Report State Board of Health of Georgia*, 1875; "Blood-Letting in Puerperal Eclampsia," etc., *American*

Journal of Obstetrics and Diseases of Women and Children, August, 1876; "Railroad Transportation of Disease Germs," etc. (Yellow and Dengue Fever in the South in 1839, 1850, 1854 and 1876), *Report of State Board of Health of Georgia*, 1876; "Pneumatic Self-Replacement in Dislocations of the Gravid and Non-Gravid Uterus," *Transactions American Gynæcological Society*, 1875; "Calculi in the Bladder After the Cure of Vesico-Vaginal Fistula," *Ib.*, 1876; "The Neuro-Dynamic Etiology and Pathology of Urinary Calculus," read before the surgical section of the International Medical Congress, 1876; "Arterial Ligation in the Treatment of Traumatic Inflammation and Gangrene," read before the International Medical Congress, 1876; "Strictures of the Œsophagus, their Nature and Treatment," *Transactions American Surgical Association*, *Vol.* 1, 1883; "Rectal Alimentation in the Naseau and Inanition of Pregnancy," *Transactions American Gynæcological Society.*

Our Association has lost one of its brightest lights, and although apparently lost to our sight for the time, his brilliant genius will shine down through the ages in inextinguishable splendor. Rest to his soul!

Dr. W. O. Dobbins.

BY W. C. WIMBERLY, M. D.

The subject of this memoir was born in Barbour county, Ala., September 26th, 1853; was reared in Eufaula, Ala., and there educated. When quite young he began clerking in a drug store, but in 1873 he engaged in the drug business on his own account in Augusta, Ga. He soon abandoned this field and returned to Eufaula, his appreciated home, and commenced the study of medicine under Dr. P. L. Baker, of that city; graduated from Louisville (Ky.) Medical College in 1876; removed to Clay county, Ga., in 1877, and to the town of Fort Gaines (same county) in 1887, prosecuting his chosen profession zealously, and with much credit to himself. September 26th, 1877, he was united in marriage to Miss Annie G. Holloway, daughter of Robt. G. and Sarah Garner Holloway, to which union five beautiful children remain, the fruits of that once happy and prosperous home. He was sometimes impulsive in the expression of his convictions, but those who knew him best never questioned the motive that prompted, except in the

light of sincerity. For his unswerving probity and scrupulous adherence to truth he was admired by all who knew him. He was frank and decided in convictions, kind and amiable in disposition. To his family he was a pattern of conjugal love and fidelity, ever moulding the principles of virtue and truth in the tender minds of his children. He was the soul of honor in his affiliation with his professional brethren; no adopted code of ethics did he observe simply because they were formulated by a corps of his peers, but that principle of ethics which involves equity from man to man, stimulated him. Though dead, the fragrance of his manly attributes will disseminate o'er his well spent life, and a shining diadem of good deeds be handed down to his posterity. He was stricken with enteric fever November 16th, 1890, and on December 16th following his immaculate soul took its flight to join those of his aged father and mother who but a few months had preceded him. During his illness no murmur escaped his lips; he acquiesced in the dispensation of Him who giveth and taketh away.

Dr. Archibald H. Baker.

BY THOMAS D. COLEMAN, M. D.

In Salisbury, N. C., on September 4th, 1851, Dr. Archibald Hand Baker was born, he being the youngest of four children that blessed the union of the Rev. Archibald Baker and Miss Sarah Pomes.

His father was an able and pious minister in the Presbyterian Church.

Youngest in point of age, though not in experience or usefulness, Dr. Baker was the first to be taken by the death angel. There survive him, Judge Hinton Baker, now Mayor of Fernandina, Fla, Mrs. Sterling C. Eve, of Augusta, and Mrs. J. E. Blackshear, of Savannah. When a mere lad, his father moved to Florida, and it was there that he obtained his early training. At the age of seventeen, he was entered as a student in Davidson College, in his native State. Here we do not find any extraordinary development save that unfaltering fidelity to duty which afterwards characterized the full developed man. He was graduated from this college with the degree of Bachelor of Arts, in the year 1873. He immediately undertook the study of medicine under the direction and tutorship of the lamented Dr. Joseph A. Eve. He finished the curriculum in the medi-

cal department of the University of Georgia in a highly creditable manner, and was graduated from this Institution in 1875. After receiving his doctor's degree he at once began to practice in this city, and had an excellent following from the first.

In 1878, Dr. Baker was fortunate enough to win the hand of Miss Annie Cozart, of Washington, Ga. Her influence was a benediction to him, and a happier home than theirs could not be found anywhere. He and his wife had born to them seven children, and there survive him, his widow and four children, two boys and two girls. Dr. Baker's life was one of hard work and self-sacrifice in spite of his ample means. His merit was bespoken by rich and poor alike, and one of the most touching incidents in this sad death was witnessed at his grave where the poor he had ministered to in life came to do him a last reverence and consecrate his dust with their tears. His manner was as simple as a child's and as sincere. Free from all ostentation of appearance or address, and with womanly gentleness he was to his patients at once both friend and physician. He gave his best energies to his profession in actual daily contact with his patients, and would not seek that fame which comes through frequent contributions to the literature of medicine. He felt that his mission was to combat those diseases that wear the mind and waste the body rather than to record such work, preferring to toil in a meek and lowly way after the manner of the Great Physician, and rather with the injunction, "Go thy way and tell no man," than that it should be published for his own elevation. It is to be regretted that some of his work has not been preserved for the benefit of his fellow workers. If his talents fitted him for any special field of medicine, it was that of the obstetrician. This, doubtless, in obedience to the axiom, "As the twig is bent will the tree be inclined." Growing as he did under the direct tutorship and in daily intercourse with Dr. Joseph Eve, it is not strange that he should, with the addition of his own genius, come to be a skilled obstetrician. At the time of his death and for several years previous, he was a member of the Medical Association of Georgia, and the American Medical Association. He was a conscientious member and honored Elder in the First Presbyterian Church of this city. His religion was not to him a thing of mere outward show, but something that he took with him in his daily rounds, and the writer has frequently heard attestations of his deep piety from the most unexpected sources. As a citizen he was highly respected by all who knew him, identifying himself with plans for the city's advancement and good. He was what few phyiscians are—a good business man. At the time

of his death he was one of the directors of the North Augusta Land Company, and was interested in other business enterprises.

It is the writer's sad privilege to record that two of Dr. Baker's most intimate friends, Dr. Henry F. Campbell and Dr. John S. Coleman, both of whom attended him in his last illness, have since been cut down by the relentless reaper, and now rest from their labors.

Dr. Baker's death was the result of typhoid fever, induced no doubt, as in many another heroic character in this noblest of all professions, by mental worry; no cessation from work, no rest-day in seven. At his prime, in the noon-time of his usefulness, and in the fortieth year of his age, his spirit was called to its God.

NOTE—There has been no report from Committee for two years.

2 GAL 318